PREMIER ISSUE

Apple2000

THE NATIONAL APPLE USERS GROUP

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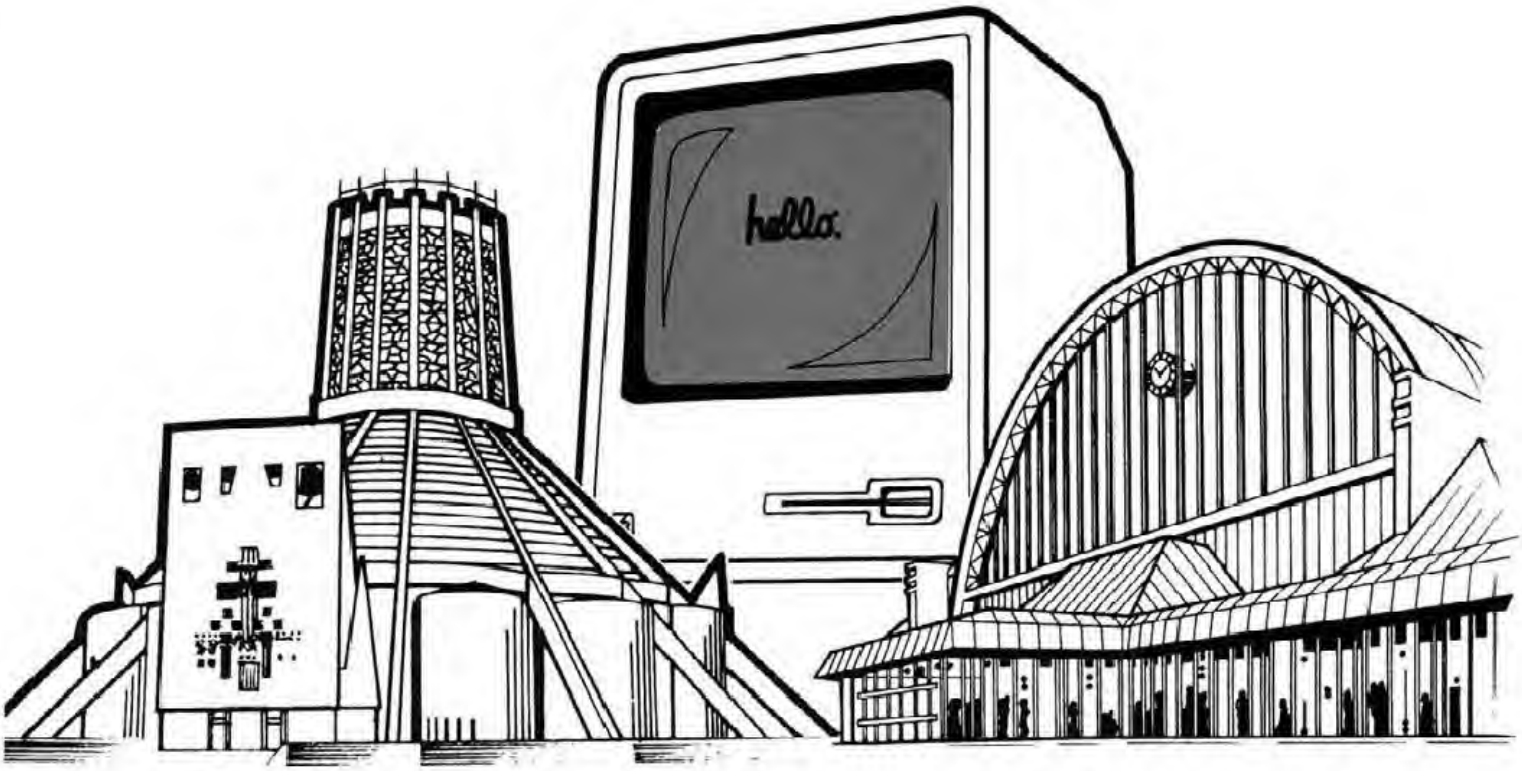

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PREMIER EDITION

The Journal of Apple2000 FOR ALL APPLE USERS

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Editor - Jim Panks

August 1986

SPLIT PROGRAM
How to split a Basic Program around the Hi-Res Graphics Screen

Captain Goodnight
A review of an Apple // role-playing adventure.

MICOL BASIC
An in-depth look at a structured BASIC Compiler

OMNIS PAGES
The latest hints and tips from Blyth.

DISK ZAPS AND ALL THAT (Part 4)
A look at PRODOS and its disk structure.

DEALER PROFILE
We look at Celtip up in Worcestershire

TODAY
Using Apple equipment in industry.

RECKONING WITH THE FORCE
Have you read your manual ? If not this could HELP

FLIPPED
A member describes his use of the FLIPPER Card.

APPLEWORKS TIPS
Did you know .....

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Edited by Norah Arnold

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SOFTWARE LIBRARY UPDATE - Double the number of disks - find out whats new

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EDITORIAL

Welcome to a new era in the world of Apple computing - **Apple2000** the new-look user group is here ready for the future and for the new developments that are about to happen.

You will see that we have made yet more improvements to the magazine, a brand new name, a full colour front, and this edition is the biggest one we have produced so far at a bumper 60 pages. There are reviews, tips, news and programs in this issue, and we hope we have included something of interest for all of you whatever machine you may have.

A special thankyou to our advertisers for their splendid support for the launch of this new magazine, and to Apple UK who advertise for the first time.

Basug, sorry I mean **Apple2000**, has been going through some changes following the committee's brain-storming session at Bewdley and we hope these will bring in more members and give a better service so that the club can expand its activities.

We have added new disks to the Software Libraries and having looked closely at the type of programs that are most in demand we now have a good idea of what things members are interested in. Norah has revised all the disks in the Mac Library, and when she came to put together all the new stuff she had collected, she came up with an amazing TWENTY SEVEN new disks full of the latest programs and utilities for the Mac, and they are available at the reduced price of £7.00.

The Force has been extensively upgraded by John Lee, and he has added a News section with all the latest information from the newstands. There is no joining fee for the Force.

BABBS has recovered from recent dramas with hardware and is going great now. It is reckoned to be the best in the country, and there are some lively debates going on between members at present. If you have a modem, give BABBS a ring and join in the fun!

We will be at the PCW Show which is being held at Olympia from 3rd to 7th September, and have stand 3000/7 in the National Hall Gallery thanks to our friends at the ACC. Come and pay us a visit.

Jim Parkes

We would like to thank AMP for the help and last minute emergency loan of equipment to ensure that this issue could be completed on time.

APPLE 2000 a New Image for BASUG

By now you should all have noticed that over the past months, the image of BASUG has undergone a considerable change. None so great as the new title being used for the colourful August magazine, 'Apple 2000'. This is the working title for the group identity, and for the magazine.

BASUG will still remain the business name registered at Company House.

There are many reasons why the image of the group has been changed. Our roots lie with the Apple enthusiasts who started the group back in 1981. At that time, the name 'British Apple Systems User Group' seemed a good one to call the varied collection of people in the group. The common factor of which was simply that we all used Apple computers either in business or at home. Today, the emphasis has changed, we still have the enthusiasts, but more and more we are getting business users joining the group. We also now have a greater diversity of machines than the original Apple][+. This situation is also reflected in the business of Apple UK Ltd. themselves. They are more and more concerning themselves with the business market as well as their traditional outlets.

We must re-affirm for you the objectives of BASUG, or as we shall now call it, Apple 2000. First and foremost, we are a self help organisation. By that I mean that we help each other. We all have some knowledge of some aspect of working with Apple computers. We can spread this knowledge to help each other with our problems, those we help can spread their knowledge to help you. This is the {fundamental reason why BASUG came into existence, and why Apple 2000 should continue strongly forward.

We can spread this knowledge to you in many ways. Through the pages of the magazine, through the Hotline, through the Force and through BABBS the bulletin board.

We support ALL Apple machines, whether they be Apple I's,][+'s, //e's, //c's, ///'s, Lisa's, Mac's, ITT 2020's or even the new unnamed machines yet to be launched. We have a vast database of knowledge amongst us as members, covering the machines, their software and add on hardware.

It was for these many reasons, that we felt that a new, fresh, forward looking name to the group was overdue. We wish to expand the membership base by at least a factor of two over the next year, and we need a new image to do it. A new image to make all and sundry sit up and take notice. Expanding the membership means we can improve the services that we offer you. Expanding the membership means we are able to advertise our existence to others in a proper way. Expanding our membership means that your magazine can only get better and better as more and more people contribute to it.

We look forward to the next years. We look forward to being there with you, the members.

Help us go forward.
Help us go forward with Apple 2000.

The Committee.

The Seal of Approval

AppleWorks Tips and Techniques

It is probably true to say that the majority of users of any particular software package only ever make use of a small proportion of the facilities that the program writer included. Here are a few tips that employ some of these to customise standard programs to make them work better for you.

1: FANCY PRINTING YOUR SPREADSHEET REPORTS

I was thinking particularly about a problem with spreadsheets in trying to make the printed reports more attractive. It is not normally possible to put printer control codes within the body of a spreadsheet template, so how do you print some parts in one font and some in another, or use the other options you know your printer is capable of providing. You can do all these things in your wordprocessor, but how to get your spreadsheet data into wordpro format?

If you look at your spreadsheet program, there is the answer all the time if only you knew what it meant. I am talking about 'Print to Disk' (or Print to File), and that is just what it does. It creates a disk file which is an exact replica of what would be printed on paper if you had chosen the usual Print option, and just as the data appears on the screen, but without formulas, formats, attributes etc. - just the data 'space padded' to fill the page. If you now read this file into your wordprocessor you can embed printer commands as you would in a wordpro document.

There are just a couple of points to watch though; firstly columnar spacing will be upset if different fonts are mixed within lines. So treat all lines which need figures in columns identically i.e. turn font options on and off in the same place on each line. Secondly, all lines including blank ones are space filled to the width of the model, say 80 columns, and finish with a carriage return. Some wordprocessors (e.g. Applewriter) count printer commands as extra characters and will cause wordwraps or linefeeds to occur in the printout if the width exceeds the default setting. This is simply overcome by resetting the default wider, to say 100, which fools the program but the print will still come out at 80 columns. Of course due allowance must be made where enlarged or condensed fonts are employed.

This technique works with most of the common spreadsheets, and with wordprocessors which can read standard ASCII textfiles. AppleWorks users have a big advantage that they can Print to the clip-board and then 'Move' it to the wordpro to paste it into a document, and work from there without even having to leave the program.

2: SENDING DATA BY RETURN

This next tip is for those who would like to use AppleWorks to prepare text files for subsequent sending on the Force (Telecom Gold) or other electronic mail services. These systems usually require data to be sent line by line, with each line terminated by a carriage retur (ASCII) file to disk' does not append carriage returns. Instead go to [5] Other Activities, then [7] Specify Information about your Printer, and then [2] Add a Printer. Choose [4] Apple Silentype, and name your printer 'Force' or something similar, and finish with [7] Print onto disk. Now return (Esc, Esc, Esc) to the Main Menu. When you want to save a piece of text to disk, choose 'Force' and it will be saved with carriage returns at the end of each line. The reason for using the Silentype printer driver is that it only does this and excludes all other control characters.

3: MAKE YOUR OWN PRINTER AppleWorks was designed originally for the combination of the Apple //e (or //c), the Super Serial card, and the Imagewriter plus a few other printers, and most users kept to that arrangement. Now that AppleWorks is reaching a wider range of users, particularly now that PlusWorks has brought it to the][+ owners, there are more and more people with printers and cards other than the Imagewriter. The standard output of course uses Imagewriter control codes for underline, bold etc. which do not work on the other Epson-like printers. The solution is simple if you can understand your printer manual sufficiently to find the turn on and turn off commands for these options, you just need to define your own printer driver. Follow the route in Tip 2 above until you get to Add a Printer, then choose [11] Customise a Printer. Enter the answers on the first page - MYPRINTER, Slot 1, Yes, No, 8.0 (inches), then enter the control codes you found from the manual, typing the commands at the keyboard e.g. (Escape) W 1 , and finish with a caret (^) - Shift 6 (or Shift N on the][). Each font command should be preceeded by the number of characters per inch for that font e.g. 5 (Return). Now when you prepare a document in AppleWorks you use the normal formatting commands, but select MYPRINTER as the printer option and you should get the correct codes sent out at print time.

HOTLINE NEWS

Here are a few of the interesting questions received since the last issue of HARDCORE.

Visidex apparently won't boot on enhanced Apple //e or Apple //c computers. In fact quite a number of the 'copy-protected' programs designed for the Apple][plus and Apple //e computers with the 6502 processor will not boot on Apple computers with 65C02 processors due to the speed differences of certain instructions. Timing dependencies required by the 'copy-protected' program cannot be met by the processor ; hence the problem. Fortunately this problem is surmountable but this is not the place to describe it.

Further questions have been raised regarding the availability of Basic compilers working in the ProDos environment. If you are interested read the review of 'MICOL BASIC structured programming language' described elsewhere within these pages. Any comments would be welcomed.

STROBE INC. MODEL 100 DIGITAL GRAPHIC PRINTER Do you have any knowledge ? If so please let us know!

Do you have knowledge of trouble-shooting or repairing Saturn or look-a-like ram cards? If you do and wouldn't mind the occasional plea for help please inform us.

AppleWorks, of course, doesn't have a built-in Mail-merge (or at least I'm not aware of it!). MGA Microsystems supply packages to enable this. However, if you use AppleWorks to produce 'mail merges' perhaps you could let us know about it so we can pass the good news on.

Apple™ 2000. Welcome back- to the future.

Welcome to all Apple 2000 members, and congratulations on your new look!

The British Apple Systems User Group has been around for a long time – almost as long as Apple. And like Apple, the Group will be around for a lot longer. Well into the next century, as your new name suggests.

Looking back, a great deal has happened since the first Apple II personal computers arrived in the UK. To Apple, to the industry as a whole, and to you, our customers.

Now we're looking to the future, to the new developments that will take personal computing far beyond its present capabilities.

Apple will be at the forefront of these new developments, and we hope that you will stay with us all the way.

No manufacturer can survive without the support and commitment of the people who use its products. Apple 2000 members have supported each other – and us – with a commitment that has never failed.

Thank you for this support. And welcome back, to a great future together.

Best wishes,

David Hancock

David Hancock
Managing Director, Apple UK

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SPLITTING A BASIC PROGRAM AROUND THE HI-RES GRAPHICS SCREEN

by Graham Keeler
Department of Pure and Applied Physics,
University of Salford.

It is well known that the memory occupied by the high resolution graphics screens on the Apple II is badly positioned, so that it gets in the way of any large program that uses graphics. To be precise, page 1 occupies memory from $2000 to $4000 (or 8192 to 16384 decimal), and page 2 occupies $4000 to $6000 (24576 decimal). Page 1, which in many ways is most useful because it can have 4 lines of scrolling text at the bottom, is the worst, leaving only 6144 bytes of memory for BASIC program plus variables.

The simplest way to get round the problem is to relocate the program above the graphics display memory, by issuing the commands

```
POKE 16384,0  (or POKE 24576 to relocate above
page 2)
POKE 103,1
POKE 104,64  (or POKE 104,96)
```

before loading the program. However, this has two drawbacks. It requires the above commands to be issued separately, either in direct mode or from a preliminary program, and it then wastes the 6K of memory below the graphics display.

The elegant solution is to split the program around the graphics memory. I have seen machine code programs which carry out the splitting, but this in itself is not sufficient: it leaves two problems. First, although a program can indeed be split, and will LIST perfectly through the split, it may not RUN correctly . Secondly, when SAVEd and reLOADed under DOS 3.3, the program will not RUN pa st the split.

I was aware that the old APPLEPLOT program was a split program, so I examined it and have thus worked out the solution to both problems. I have also written my own version of a machine code SPLIT program which assists with the process of correcting the other problems. The program will actually split a program anywhere, and can be used, for instance, to bury a piece of machine code or a shap e table in the middle of a program. However, by far the most important reason for splitting a program will be to avoid the graphics display, and the following discussion assumes that this is what you want to do. (A piece of machine code can equally well be captured at the end of a program simply by altering the pointer at locations 175 and 176, unless the machine code cannot be relocated.)

Before starting, please note that IT IS VITAL THAT YOU HAVE AN UNSPLIT VERSION SAFELY SAVED ON DISC BEFORE STARTING THE SPLITTING PROCESS. Similarly, you should also ensure that each change is SAVEd, under a different filename, before splitting. In particular, split programs cannot be edited in any way.

The SPLIT program

Before starting, you will need to enter the program SPLIT into your computer. If you have an assembler this is quite simple, following the assembly program listed. If not, the easiest way is to enter the program from the hexadecimal dump, also listed. To do this, first enter the Monitor by the command

```
CALL -151
```

when the Applesoft] prompt symbol will be replaced by a star. Enter the lines as

```
8FE0: 20 E6 8F 4C D0 03 A9 E0
8FE8: 85 73 8D F6 03 A9 8F 85
```

etc. When you have finished entry, list the program by 8FE0.91E7 and check that it is exactly the same as the listing shown. If not, correct any erroneous line by re-entering it.

Return to BASIC by typing 3D0G, and save the program to disc by BSAVE SPLIT.OBJ0,A$8FE0,L$220

Note that the address chosen for the SPLIT program is up near the top of memory and is the highest permissible under ProDOS while also being suitable for DOS 3.3. If you are working with DOS 3.3, and you have your own assembler with which to enter the assembly language version, you could put the program a little higher by altering line 37 to ORG $93E0.

Carrying out the splitting process

Now you are ready to start the splitting process. Load your original program, then at the very beginning of the program, add the line:

```
1 POKE 00000,000: POKE 00000,000
```

and SAVE it again under a different name. To find out where the split occurs, type HGR (or HGR2 if you want to split around the second graphics page only). LIST the program, which will have been overwritten by the screen clearing initialization of HGR, and this will show exactly where the overwriting has started. In general, when the back end of a program is corrupted, the LIST may have a half correct line ending in a string of question marks or it may end in screenfuls of garbage, but in the case where it is truncated by HGR it should just stop prematurely.

In order to make the program RUN correctly, you must ensure that execution never tries to run through the split. This can be done by a GOTO jump around the split, with the last line before the split a harmless REM. To achieve this, load the full program again, and before the last COMPLETE line you saw above, insert two lines. For example, If the last complete line is 500, insert

```
496 GOTO 500
498 REM ANY STRING LONG ENOUGH TO COVER
THE COMPLETE AND INCOMPLETE LINES
```

and save this modified form again.

This will ensure that execution always jumps round the split, and the program should now RUN successfully after being split. (If the last complete line and any incomplete line are very short, it may very occasionally be necessary to make the insertion before the last two lines.)

You are now ready to run the SPLIT program. The first time you run it, it must be BRUN by the command

BRUN SPLIT.OBJ0

It will reply with the prompt

START OF SPLIT (IN HEX):

To split around the primary (page 1) graphics screen, type 2000, or for page 2 only, type 4000.

The second prompt is for the end of the split, to which you should reply 4000 for page 1 only, or 6000 for page 2 (or to protect both graphics pages). The split is now carried out, after which the program will give the necessary data to make the split permanent; for example

```
NEW ADDRESSES FOR LINK ARE -
POKE ADDRESS: 8178
POKE VALUES: 1 AND 64
```

If you need to run the program again, it can be done more speedily simply by ty ping & and pressing <RETURN>.

Making the split permanent

A more complicated process is necessary to enable the program to be SAVEd to disc, and subsequently LOADed and RUN successfully, if you are using DOS 3.3. (However, if you are using ProDOS the problem does not arise, and this stage can be omitted. Simply SAVE the program as split above.)

After the program has been split, note the three values given by the program as explained above. Load the unsplit program back from disc and edit line 1 using the information given. The 'POKE ADDRESS' is the first number for the first POKE, but must be increased by one for the second POKE. The 'POKE VALUES' are the second numbers for each POKE. When editing, make sure that you add leading zeroes to make the line exactly the same length as it was originally, otherwise the program length will be altered and the values given will no longer be correct. For instance, if the numbers shown above were given, line 1 should be altered to

1 POKE 08178,001: POKE 08179,064

Now you must split the program again, for the final time; you can use the & hook to save doing another BRUN. This time save the split version to disc, as the final, working version, and it can successfully be reloaded and RUN. Note that if you simply LOAD and LIST it, it will stop at the split, but on execution line 1 will restore the back end. Note also that the split program should not on any account be edited. Any change must be made on the original version, and the whole splitting process then repeated.

How the SPLIT program and the modifications work.

To understand the process, it is necessary first to explain the method by which an Applesoft program is stored in memory. The start and end of the program, and the separator for each line, is a zero byte, 00. Each line begins with the address (in hex, low byte first as always) of the start of the next line. The SPLIT program jumps from one address to the next, checking to see whether each address is higher than where the split is to start. When it finds such an address, it alters the address at the start of the last complete line to the end of the split (plus 1, for safety's sake), for example $4001 (or $6001 for a split to the end of page 2) where the next line is to start. The block of memory from the first incomplete line (which will be a little before the start of the split, and hopefully should be the REM line that you inserted) to the end of the program is moved up in memory by the Applesoft BLTU (block transfer utility) to start at the end of the protected area. Finally, all the 'next line' addresse s beyond the split are corrected, and the Applesoft pointers adjusted.

The reason for the GOTO and the REM is that although when LISTing, Applesoft uses the addresses to jump from one line to the next, during normal execution it just works its way through one line, then carries on from that position in memory expecting to find another line of instructions. However, on encountering the GOTO it uses the LIST method of jumping from line to line via the addresses until it finds the line required. The REM is simply a safety precaution to make sure another line after the GOTO does not sneak in before the split.

When a program is SAVEd and then reloaded, DOS 3.3 updates the next line pointers to point straight after the present line, since the program may not be being reloaded at the same address as it came from. ProDOS, on the other hand, knows where the program was saved from, and simply corrects the addresses if necessary, thus preserving the split.

Thus when DOS 3.3 encounters the split, it "corrects" the address of the last presplit line back to the end of the line, and it is necessary to alter it again to $4001 (or $6001). This is the purpose of line 1 inserted at the start of the program, so that the program can patch itself back together before execution reaches the split.

Incidentally, the split program as a whole cannot be edited, but it IS possible to edit the section beyond the split. Simply alter the pointer to the start of the program to $4001 by POKE 103,1: POKE 104,64: POKE 16384,0 (The last POKE ensures that the program is preceded by a zero as required). Applesoft now for gets about the first section of the program and you can edit at will, then reset the pointer to $801 by POKE 103, 1: POKE 104, 8 when you have finished, before SAVEing the program.

You could for instance modify APPLEPLOT in this way, if say you want to set it up for a different type of printer.

You can also store a graphics image in the HGR area (or a section of machine co de for that matter) and bring it up on the screen at will. The best way to do this is to prepare the screen image first, then dump the whole graphics area on to disc. When you have your successful, running version of the split program in memory, BLOAD the binary graphics file back into the screen area before finally SAVEing the split program. The graphics image will of course have to be displayed using the soft switches rather than HGR.

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```
8FE0- 20 E6 8F 4C D0 03 A9 E0
8FE8- 85 73 8D F6 03 A9 8F 85
8FF0- 74 8D F7 03 A2 00 20 14
8FF8- 91 20 01 91 A5 3E 85 06
9000- A5 3F 85 07 A2 19 20 14
9008- 91 A2 06 20 14 91 20 01
9010- 91 18 A5 3E 69 01 85 08
9018- A5 3F 69 00 85 09 A5 67
9020- 85 75 A5 68 85 76 A0 01
9028- B1 75 D0 06 A2 1F 20 14
9030- 91 60 C5 07 90 09 D0 2A
9038- 88 A5 06 D1 75 90 23 A5
9040- 75 85 EB A5 76 85 EC A0
9048- 01 B1 75 48 88 B1 75 85
9050- 75 68 85 76 D0 D0 A2 43
9058- 20 14 91 60 A2 65 20 14
9060- 91 60 A5 75 85 9B A5 76
9068- 85 9C A5 B0 85 97 A5 AF
9070- 85 96 38 A5 08 E5 75 85
9078- 06 A5 09 E5 76 90 D7 85
9080- 07 18 A5 06 65 AF 85 94
9088- 85 1A A5 07 65 B0 85 95
9090- 85 1B A8 A5 94 C4 74 90
9098- 06 D0 C1 C5 73 B0 BD 20
90A0- 93 D3 A5 EB 85 75 A5 EC
90A8- 85 76 A0 00 18 B1 75 65
90B0- 06 91 75 48 C8 B1 75 65
90B8- 07 91 75 85 76 68 85 75
90C0- B1 75 D0 E6 A2 83 20 14
90C8- 91 A2 A3 20 14 91 A6 EB
90D0- A5 EC 20 24 ED A2 B2 20
90D8- 14 91 A6 08 A9 00 20 24
90E0- ED A2 C1 20 14 91 A6 09
90E8- A9 00 20 24 ED 20 8E FD
90F0- A5 1A 85 AF 85 69 85 6B
90F8- A5 1B 85 B0 85 6A 85 6C
9100- 60 A5 33 48 A9 BA 85 33
9108- 20 6A FD A0 00 20 A7 FF
9110- 68 85 33 60 BD 20 91 F0
9118- 06 20 ED FD E8 D0 F5 60
9120- 8D D3 D4 C1 D2 D4 A0 CF
9128- C6 A0 D3 D0 CC C9 D4 A0
9130- A8 C9 CE A0 C8 C5 D8 A9
9138- 00 A0 A0 C5 CE C4 00 8D
9140- 87 D0 D2 CF C7 D2 C1 CD
9148- A0 C4 CF C5 D3 A0 CE CF
9150- D4 A0 CE C5 C5 C4 A0 D3
9158- D0 CC C9 D4 D4 C9 CE C7
9160- 8D 00 8D 87 C5 CE C4 A0
9168- CF C6 A0 D3 D0 CC C9 D4
9170- A0 C9 D3 A0 CC C5 D3 D3
9178- A0 D4 C8 C1 CE A0 D3 D4
9180- C1 D2 D4 8D 00 8D 87 D0
9188- D2 CF C7 D2 C1 CD A0 D4
9190- CF CF A0 CC C1 D2 C7 C5
9198- A0 D4 CF A0 D3 D0 CC C9
91A0- D4 8D 00 8D CE C5 D7 A0
91A8- C1 C4 C4 D2 C5 D3 D3 C5
91B0- D3 A0 C6 CF D2 A0 CC C9
91B8- CE CB A0 C1 D2 C5 A0 AD
91C0- A0 8D 00 D0 CF CB C5 A0
91C8- C1 C4 C4 D2 C5 D3 D3 BA
91D0- A0 00 8D D0 CF CB C5 A0
91D8- D6 C1 CC D5 C5 D3 BA A0
91E0- 00 A0 C1 CE C4 A0 00 00
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Captain Goodnight

A role playing adventure for the Apple //

A review by Len Cavanagh

This is a role playing graphic game from BRODERBUND, where you as Captain Goodnight have to save the Free World within 24 hours from the demonic Doctor Maybe who lives on Doom Island. Dr.Maybe is demanding 200 billion dollars in gold bullion, or he will destroy the World with his Doomsday machine.

The game starts with Captain Goodnight landing at the Base Commanders Headquarters in a Helicopter of very strange pedigree. Captain Goodnight then gets his Mission Briefing, which is to travel to the Fear Islands locate and destroy the Doomsday Device before it can be activated. To assist you in your mission you are provided with the very latest F112-A/6B Jet Aircraft.

Once you have absorbed this information, moving the joystick right causes Captain Goodnight to race off to your Aircraft which is parked on runway 019, then pressing button 1 allows you to board. All controls for this game are on the joystick, and by pushing the joystick to the right and up you are airborne ready to do battle with the evil Dr.Maybe.

As you fly a scrolling landscape is seen below and very soon you are over enemy territory. This is where the fun begins. There are heat seeking Cruise missiles, ground based Rockets and enemy Jets to contend with, also on the ground there are Radar scanners which if not destroyed will trigger the Cruise missiles, which are very difficult to avoid.

If for no reason of your own you find that you have been shot down (joystick fault ??), then fear not, for it would appear that Captain Goodnight is made of rubber, because no matter how badly your Jet demolishes the countryside in one of it's many crashes, Captain Goodnight always survives and in a matter of seconds a rescue craft arrives on the scene and takes you to a place, where lo and behold a brand new F112-A/6B Jet is awaiting to carry on the mission. The only constraint in this game is time, and a digital readout at the top of the screen gives you periodic reminders of the time remaining to complete your task.

Assuming you are a good pilot you will shortly reach the coast and the Naval craft of Dr.Maybe, but by now you are getting pretty good and these prove to be no obstacle, and eventually you are once again flying over terra firma, and in a few short miles you reach the Araan desert where you automatically eject from your Jet and parachute down. Captain Goodnight now proceeds on foot with only his Laser gun for defense against Dr.Maybe's robots, which require a lot of skill to get the better of. On your route you will find Trucks an Jeeps scattered around, some of these you can commandeer, which speeds your progress, and in no time at all you find yourself at a Submarine Base. After clambering in to the Submarine you receive a message which needs decoding, if you answer this correctly you can then cast off for Odom Island, but keeping a wary eye out for Minefields and Shipping. Land Ho !! but it's back to being a pedestrian again and confrontation with even more fearsome robots from Dr.Maybe, however there is the occasional Truck available and an Overhead Railway plus a Matter Transporter, and with all these at your disposal there should be no trouble reaching the coast again.

On reaching the coast a speed boat is conveniently moored alongside the jetty, which you jump into and speed off to Modo Island, unfortunately Dr.Maybe is now very aware of your presence and sends his low flying Bombers in to prevent you reaching land. If you should overcome this hazard, it's back to blasting robots again, and if perchance a deserted Tank is found then life becomes much easier, and with luck you should reach an Airstrip where a very old Seaplane may be just what you need to fly to DOOM ISLAND.

The grahics and sound were excellent

In conclusion I found CAPTAIN GOODNIGHT to be a challenging and interesting game with plenty of variety in the various scenarios. The graphics and sound were excellent, especially the little touches, like if you leave Captain Goodnight waiting too long he pulls out a Yo Yo and plays with it. My only criticism is that there is no Save Game facility, and it is just a little tedious having to plough through the early parts of the game once they have been mastered.

TITLE:-	CAPTAIN GOODNIGHT
AUTHORS:-	Michael Wise, Lauren Elliott and Gene Portwood
PUBLISHER:-	Broderbund
REQUIREMENTS:-	Any Apple][series
REVIEW:-	Len Cavanagh

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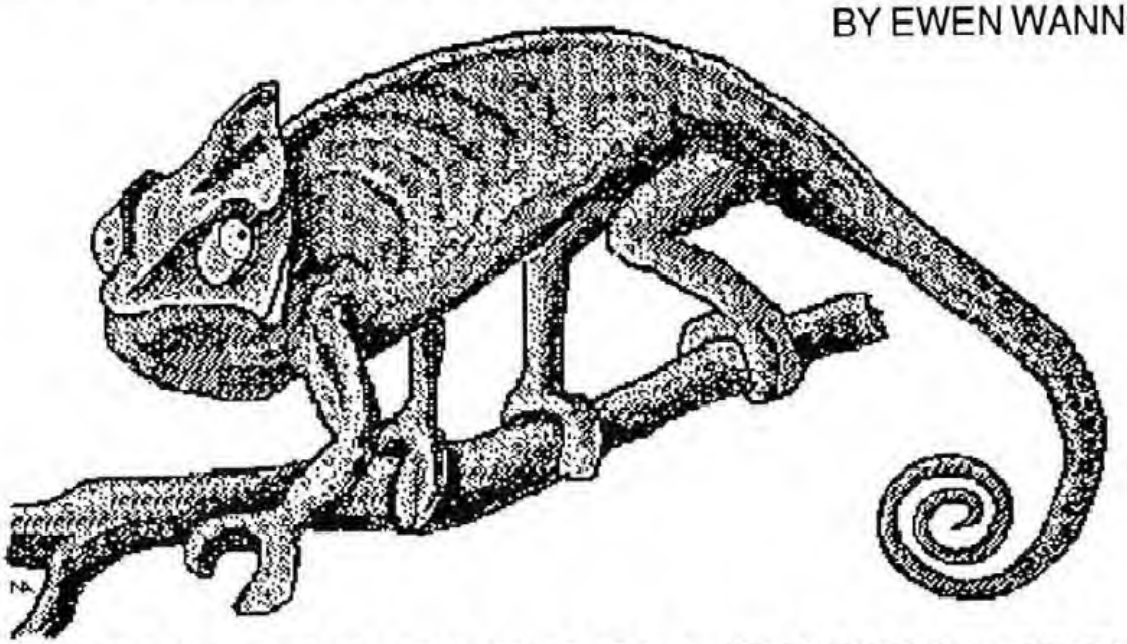
CHAMELEON

BY EWEN WANNOP



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The CHAMELEON is available at £16 from P. O. Box 177, St. Albans, Herts. AL2 2GE.

MICOL BASIC (a structured compiled language)

A REVIEW by Dave Ward

Publisher : Micol Systems Canada
9 Lynch Road, Toronto, Ontario, Canada M2J 2V6
Price : $49.95 + $5 (shipping)

System requirements :
Apple][plus , Apple //e or Apple //c
At least 64K of memory with Applesoft in ROM
Single disk][drive

Optional extras :
Two or more disk drives
80 column card : Apple //e, Apple //c or equivalent
Videx or equivalent.
< Only these are supported if yours will not work then you will have to use 40 column mode >
Ram disk for speedier development.
Hard disk drive.

Around five years ago a number of Applesoft basic compilers were published which claimed to speed-up program execution by upto 20 times. As far as I am aware these have not been updated to the ProDos operating system. Fortunately MICOL SYSTEMS of Canada have published the MICOL BASIC package which operates only under ProDos.

** See highlighted box for MICOL BOASTS. **

I have been using MICOL BASIC for a couple of months so here's an in-depth look at the package. MICOL BASIC is on a single 5.25" ProDos formatted diskette which is copyable.

A comprehensive 250+ page manual is supplied in a plastic spine binder. The manual, registration card and diskette are secured in the pockets of a vinyl wallet.

The manual describes MICOL BASIC and assumes that you have a reasonable understanding of Applesoft. The enclosed diskette is intended as a master copy and you should immediately make a copy using a standard copier.

HOW IT WORKS

Place your copy of the Micol Basic system diskette into the main disk drive and switch on the computer and you will soon be greeted by the following screen :

Choose option 1. and you will find yourself in the text editor which is probably where you will be most of the time! The text editor is a 'line editor' which is simple to use but quite powerful.

On entry you will see the following header on a blank screen :

```
AUTO,A(DD),CO(MP),CON,D(EL),DIR,E(DIT),F(IND),L(IST),LO(AD),M(EM)
,MERGE,NEW RUN,P(RINT),R(EP),S(AVE),SET,EX(IT),LOCK,ZAP+
```

When entering these commands the characters in parentheses are not significant. Below is a description of them :

AUTO - Allows automatic prompting of line numbers - it is a toggle.
ADD - Lets you add a line. Prompts with number if AUTO active.
COMP - Invokes the compiler just like choosing option 2 from main menu
CON - Converts numbers between decimal & hexadecimal.
DEL - Lets you delete a line or range of lines.
DIR - Displays a directory.
EDIT - Allows you to edit a line or range of lines.
FIND - Finds all lines containing your specified string of characters.
LIST - Lists the program or part thereof to the screen.
LOAD - Loads a specified text file.
MEM - Displays all volumes on line and free memory.
MERGE - Merges two text files.
NEW - Wipes the work area clean so you can enter a new program.
RUN - Saves compiles links and runs the program in the editor.
PRINT - Same as LIST but directs output to your printer.
REP - Replaces one character string with another globally.
SAVE - Saves program in memory to a text file.
SET - Set a new ProDos PREFIX .
EXIT - Exits the editor back to the main menu.
LOCK - Lets you lock a file.
ZAP - Allows you to delete a file.

MICOL BASIC supports almost all of the features of Applesoft but because it is inherently a structured programming language you cannot directly compile your Applesoft programs without making at least two changes. We'll discuss those later when we compile the LITTLE BRICK OUT program from the Dos 3.3 system master diskette. First though let's look at the main differences between MICOL BASIC and Applesoft :

1> MICOL BASIC requires a text file with which to work, so any Applesoft program will need converting to a text file before compiling can commence.

2> Like other structured programming languages a program name is needed as the first line : 10 PROGRAM NAME_OF_PROGRAM [Control A on the II+ gives the underline character].

3> Unlike Applesoft spaces are important so you must add them. Also variable names can be of any length (all characters being significant). Variable names can consist of alphanumerics and the underline character but must start with a letter. Beware GOSUB100 would be treated as a variable you must enter GOSUB 100 if thats what you want to do.

4> As MICOL BASIC uses memory from $0300-$0330 and if your program uses this for a machine code sub-routine you'll have to move it.

5> VTAB 20 must be converted to VTAB(20) to work with MICOL BASIC. This also applies to HTAB.

6> MICOL BASIC supports genuine integer arithmetic even in FOR-NEXT loops thus improving execution speed.

7> You must have only one NEXT statement per FOR statement and it must be followed by the variable name : NEXT NUM . NEXT X,Y is not allowed and must be changed to say NEXT X : NEXT Y.

8> The ? contraction for PRINT is not supported.

9> You are advised to place certain lines near the start of your program if it is to execute properly. The program name must be the first line and any compiler option lines must be next (these will be outlined later). DATA statements must be placed next and take care since any numbers that look like integers and are less than 32768 will be read as integers!! DIM statements must be next and you are restricted to use only numbers in dimensioning arrays - variables are not allowed. Problems could arise if you use more than 5 dimensions!

10> MICOL BASIC allows you to define a boolean variable-type. This can cause a problem if the Applesoft program you are attempting to compile has a statement such as IF NOT NUM THEN NUM = 99 : since NUM is not boolean you will get an error. Therefore change the statement to IF NUM = 0 THEN NUM = 99.

11> MICOL BASIC supports a MOD statement. MOD produces the remainder when one number is divided by another - this can be very useful.

12> If you specify RND(12) the compiler will assume 12 is integer! and will produce a number between 1 and 12. This is a very nice feature - but watch your Applesoft programs as it could possibly cause a problem under some circumstances.

13> MICOL BASIC supports the following statements which are neat and very useful :

A} BELL = PRINT CHR$(7) in Applesoft
B} PRTON = Switches your printer on.
C} SCREEN40 = Sets 40 column screen & switches off printer.
D} SCREEN80 = Sets 80 column screen & switches off printer.

14> REM REMARK WARNING COMMENT NOTICE can all be used in MICOL BASIC to signify comments. Such comments are, of course, ignored by the compiler.

15> TRACE NOTRACE are supported plus DISPLAY which can be used to show up to 10 variables. Debugging is handled somewhat differently in MICOL BASIC and your compiled program will be much larger since line-numbers will have to be stored.

16> MICOL BASIC does not support the disk command 'PRINT CHR$(4)' instead it has its own special statements. Text files and random files are supported but any of your programs using disk I/O will have to be modified before they can be compiled. These are listed below :

A} BLOAD - 10 BLOAD "FILENAME" : BLOAD FILES$
B} BRUN - 93 BRUN "FILEX" : BRUN F$
C} APPEND
D} DELETE
E} PREFIX
F} BSAVE - Is supported but is a little complicated.
G} CATALOG- A special file is present on the diskette.

To use these last five statements you would be advised to read the manual where their use is well described.

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Program chaining supported.

Text files are supported and a maximum of 8 can be open at one time. MICOL BASIC has a default setup to only allow 3 files to be open at one time because of memory constraints ; when a file is opened a 1 Kilobyte buffer is reserved. This reserved 3 Kilobytes (3 buffers) can be changed by the programmer.

File numbers 1 through 8 are reserved for disk files (0 = Screen both 40 and 80 9 = Printer). Listed below are the new statements; note that the numbers in parentheses are the file/buffer number to be used and that only numbers are allowed :

A} WOPEN (1) - 21020 WOPEN (1) "FILENAME" : WOPEN (3) FILEN$ opens a file deleting the file if it already exists. WOPEN (0) or WOPEN (0) "SCREEN" sends output to the current 40 or 80 column screen. If the file/buffer number is (9) output is directed to the printer.

B} ROPEN (2) - Similar to WOPEN but only works with an existing file which is opened for reading. It is, however, possible to write to the file although this feature is really only intended for random files.

C} CLOSE (1) - Closes the file using buffer (1).

D} INPUT (3) - Reads specified data from the file associated with buffer (3). Unlike Applesoft you can input from the keyboard, if you wish, whilst also reading data from a file without having to PRINT CHR$(4).

E} PRINT (1) - Writes to file using buffer (1).

F} GET (2) - Reads a single data byte from the file.

G} EOF (3) - Boolean that becomes true when the end-of-file is attained.

H} SEEK (3) - Used to SEEK a particular record in a random access file. For example 21080 SEEK (3),21 , 1000 : 21 refers to the record number and 1000 to the record length. Both numbers and variables are allowed. If you know what you are doing you can have records within records simply by changing the record length!!

17> Now we come to the important features of MICOL BASIC the structured statements. Like Applesoft FOR-NEXT loops are supported but are much faster since integer loop variables can be used. The variable name must appear after the NEXT statement and this variable cannot be altered by the programmer like you can in Applesoft. The manual advises you not to 'jump' out of FOR-NEXT loops and supplies the programmer with 3 other loop constructs :

```
A}   10 PERFORM 1000 UNTIL A = 14
     100 PERFORM RAND UNTIL A = 14
     1000 ROUTINE RAND
     1020 A = RND(20)
     1090 RETURN
```

As you can see the subroutine RAND is called until the condition A = 14 is met.

```
B}   50 REPEAT
     60  GOSUB RAND
     70  SS$ = "Anything"
     80 UNTIL A = 14
```

```
C}   50 WHILE A <> 14
     60  GOSUB 1000
     70  SS$ = "Something else"
     80 WEND
```

Note that B} will be entered at least once whereas C} will only be entered if A <> 14.

With all these loops to aid the structure of your programs you will never need to jump out of loops again! Jumping out of loops is terrible programming and can cause disasterous problems. If you want a demonstration of this see Hardcore April 1986 pp 35.

18> You may give sub-routines a name : 1015 ROUTINE EXAMPLE_NAME as might be expected you can use : GOSUB 1015 or GOSUB EXAMPLE_NAME . This is a typical feature of structured languages and is extremely useful as it makes for modular programming with its associated ease of reading.

19> As you might expect the IF-THEN statement has been extended to include IF-THEN-ELSE providing all is on one line. A further extension has been added to allow blocks of statements after THEN or ELSE :

```
10 FLAG! = TRUE : COMMENT FLAG! IS A BOOLEAN
     VARIABLE
20 IF FLAG! THEN BEGIN
30   PRINT " THIS WILL BE PRINTED"
40   PRINT " SO WILL THIS"
50 ELSE BEGIN
60   PRINT "THESE LINES WON'T";
70   PRINT " BE PRINTED"
80 ENDIF : NOTICE the use of BEGIN & ENDIF
```

20> MICOL BASIC supports more of the Applesoft statements than most other Dos 3.3 compilers. The ones that aren't supported are: CONT LIST LOAD NEW RECALL RUN SAVE SHLOAD STORE . As far as I can see nothing is lost by their omission.

21> The & statement is supported but uses a different location in 'Page3' so you will have to alter the & setup. The reason for this is that MICOL BASIC uses this vector.

22> Lo-res graphics is supported and can be very much faster due to the use of integer arithmetic. See listing 3 below :

```
100 PROGRAM GRAPH
200 INT(A-Z) : REMARK ALL VARIABLES WILL BE
INTEGER
300 GR
400 FOR X_COORD = 0 TO 39
500   FOR Y_COORD = 0 TO 39
600     COLOR = RND(15) : NOTICE PICKS FROM 1 TO 15
          RANDOMLY
700     PLOT X_COORD,Y_COORD
800   NEXT Y_COORD
900 NEXT X_COORD
920 TEXT
940 STOP
```

Observe how the indentation in the listing above aids reading & debugging - you'll soon notice a missing NEXT!

This program can be entered by invoking the Editor (option 1) from the main menu. Next type AUTO 100,100 followed by carriage return. After entering ADD followed by return you will be automatically prompted with line numbers starting at 100 and incrementing by 100.

There appears to be a very minor 'bug' in the editor since it won't accept the statement GR if the line number is 99 or less. This can be overcome if you enter a space after the GR!

23> Hi-res graphics are supported but you must still beware that your program does not stray into the graphics page to which you are writing.

24> Chaining is fully supported but does impose some restrictions on the programmer. For instance the dimensions statements must be in the main program. It is good practice to setup all variables in the main program so as to alleviate any problems that could possibly occur if garbage collection is taken in one of the chained programs.

25> Strings are handled very cleverly in MICOL BASIC to prevent 'garbage collection'. In Applesoft every time you change the contents of a string the old data is left as garbage and eventually the string space is used up and all these old data strings have to be removed ('garbage collection'). To prevent this occurrence some compilers make you specify the maximum length of strings before you compile the program. MICOL BASIC doesn't and only produces garbage if you replace a string by a larger one giving

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you the best of both worlds. You may stop garbage collection altogether if you set your strings to their maximum length on their first assignment.

26> MICOL BASIC provides you with extensive control over how your program is compiled. These are termed 'compiler options' and are entered as a line or lines immediateiy after the program header line. The options available are listed on next page :-

A} Variable type declaration.

You can specify that variables are either string or integer regardless of the last character in the variable name. See listing 1 below. Line 20 specifies that all variables starting with A,B or C will be integer variables whatever other characters follow. All other characters except those starting with the letter Z will be string variables. This can be useful in that you can specify that all the variables in your program are integer, if appropriate, with the accompanying increase in speed

Listing 1.

```
10 PROGRAM COMPILER_OPTIONS
20 INT(A-C):STR(D-Y)LIST,PRINTER
30 @ LIST,PRINTER
35 @
40 A = 35
50 D = "Hello"
60 Z = 1.033
```

nb. @informs the compiler that directives follow.

B} Program & variable space allocation

A}	LOMEM	Start of program	$0900 = 2304
B}	VAR	Start of variables	$6E28 = 28200
C}	SVAR	Start of string variables	$7210 = 29200
D}	ARR	Start of arrays	$730A = 29450
E}	SARR	Start of string arrays	$7530 = 30000
F}	HIMEM	Just below ProDos buffers	$87FF = 38415

You can alter the positions of these adresses providing that they are in ascending order. For instance you may require big arrays - anyhow the larger the variable space the smaller the program!

C} Compiler options

LIST This causes the program to be listed during compilation.
PRINTER Sends the listing to your printer.
CODE This produces an 'assembly listing' of the machine-code generated by the compiler.
CHAIN Used to tell the compiler that your program will chain another.
UNCHAIN Must be specified in the program which is chained to tell the compiler which program is to chain it. You must, of course, have compiled the program that chains it !
VAR2 Normally MICOL BASIC would treat variables such as NA$ and NAME$ as different. But with the VAR2 option specified would be treated as the same - just as in Applesoft! This is useful when converting your own programs.
NOGOTO This option will prevent you from using the GOTO statement in your programs !! GOTO can cause problems & make listings difficult to follow unless you are a disiplined programmer.
QUICK Normally the compiler compresses the code generated to save space but this increases the 'run- time". Specifying QUICK produces a slightly faster program but its bigger.
LINE Provides line number reference in your program. This takes up a lot of space - 7 bytes per line & more for FOR-NEXT loops etc. Useful when debugging your programs.
ERROR Almost as prodigal as LINE option & all it allows you to do is RESUME after an error.

Compiling Listing 1 produces the following:

Listing 2.

```
3   [0] 2304  $0900 40 A = 35
4   [0] 2343  $0927 50 D = "Hello"
5   [0] 2352  $0930 60 Z = 1.033

NO ERRORS IN COMPILATION
                    SYMBOL TABLE DUMP
                      SIMPLE VARIABLES
1.033 R6E37 35  I6E2A A  I6E28 Z     R6E32
                      SIMPLE ARRAYS
                    STRING VARIABLES
D       7210
                      STRING ARRAYS
20        BYTES SIMPLE VARIABLE SPACE USED
0         BYTES SIMPLE ARRAY SPACE USED
2         BYTES SIMPLE STRING SPACE USED
0         BYTES STRING ARRAY STORAGE USED
4815      BYTES STRING BUFFER AVAILABLE
60        BYTES CODE GENERATED
25785     BYTES UNUSED IN PROGRAM
```

LIST,CODE,PRINTER and then compiling produces the following listing of the program and 'machine-code' generated.

Listing 3.

```
3   [0] 2304  $0900 40 A = 35
ORG $0900
LDA #$00
STA $1A
LDA #$09
STA $1B
LDX #$FF
TXS
LDA #$FF
STA $73
LDA #$87
STA $74
LDA #$28
STA $69
LDA #$6E
STA $6A
JSR  INIT
LDX #$02
LDA #$00
LDY #$80
JSR  IASS
4   [0] 2343  $0927 50 D = "Hello"
LDX #$04
LDA #$E8
LDY #$83
JSR  SASS
5   [0] 2352  $0930 60 Z = 1.033
LDX #$0F
LDA #$0A
LDY #$80
JSR  RASS
JSR  END

NO ERRORS IN COMPILATION
```

COMPILING AN APPLESOFT PROGRAM

A} Make sure you have a copy of the program on a ProDos formatted diskette if not use the Convert program on you ProDos utilities diskette to copy one over from a Dos 3.3 System Master diskette so that it resides on a copy of your MICOL BASIC diskette.

B} As you already know MICOL BASIC requires text files to compile so you will therefore need to make the conversion. The first thing is to find a line number not in use. I chose 223. Enter this line as follows :

223 PRINT CHR$(4)"OPEN LBO.TEXT":PRINT CHR$(4)"WRITE LBO.TEXT": LIST : PRINT CHR$(4)"CLOSE":STOP

Then type RUN 223 when the program will write itself as a text file on the diskette. Boot up your MICOL BASIC diskette and when the main menu appears choose 1 for the editor. Then type LOAD LBO.TEXT. Choose the RUN rather than the CO(MP) command! You will be prompted to save the file - just press the Y key. The file will be saved then the compiler loaded and an attempt made to compile it. You will immediately get an error telling you to read section 4.2 of the manual because you haven't got a program header. You will then be prompted CONTINUE(Y/N) opt for N when you will soon be prompted COMPILE ANOTHER FILE(Y/N/E/L)? choose E to get back into the editor and then type in the following lines :10 PROGRAM BRICK_OUT

DEL 223

Now try to RUN the program again until it actually compiles links and runs. Before this happens you will get about 45 errors - most of them HTAB & VTAB with a few boolean errors.

By now you've probably been wondering why on earth choose RUN rather than COMP. Well after a compiler error choosing E re-loads the editor then your program and places the cursor on the line close by the error! Also you are 'forced' to save your amended file before the compiling process gets underway!

Unfortunately this program uses a machine code sound generator starting at $0300 (768 decimal) which must be moved. First use the REP command to change all occurrances of 768 with 868. Also you will need to change all the addresses poked in the subroutine starting at line 7000 and the third last location has a zero poked into it change this to 100.

The compiled version is very difficult to play because it so fast and masochists may make it faster yet by specifying that all the variables are integers!!

27> Working with a 'ramdisk' makes program development a breeze - you can edit your program then run it (remember that run forces you to save the amended program then compiles links and runs it). After it has run you will be left with an Applesoft prompt but no apparant way of getting back to the editor. Well MICOL have thought of that and have reserved the & (ampersand) command for that purpose : thats why MICOL BASIC programs use a different ampersand vector! Enter & then press return and you will be asked what program to BRUN (be careful because MICOL BASIC appends .BIN to it). You would normally type MENU here and magically the main menu appears so that you can soon return to the editor to carry on with your program development.

SPEED AND PROGRAM SIZE CONSIDERATIONS

Compiled programs tend to be larger than their Applesoft counterparts. The Dos 3.3 compilers produced programs which were generally between 2 & 2.5 times the size of the origional program. A large proportion of this was due to a 'run-time-library' which had to reside in ram memory. MICOL BASIC cleverly places its rather large 'run-time-library' where the Applesoft/ProDos interface (BASIC.SYSTEM) resides thus leaving about the same space as was left for Applesoft. MICOL BASIC also compacts its code and takes up, in general, about 50% more space. Using a few small programs I will show the effects of compiling various programs on size and speed :

Program		Program Size in bytes		Speed in seconds		
		A/S	Micol	A/S	Micol	Micol Integers
T1	Normal	47	87	14.1	10.6	4.0
	Quick		93		10.00	3.3
T2	Normal	57	90	30.4	11.5	4.8
	Quick		96		10.9	4.2
T3	Normal	1657	1890	138.7	11.5	4.9
	Quick		2696		10.9	4.2
T4	Normal	55	96	31.0	14.0	6.7
	Quick		106		12.7	5.5
T5	Normal	57	104	42.6	22.4	9.0
	Quick		114		21.1	7.7
T6	Normal	71	104	39.6	24.2	17.5
	Quick		114		23.0	16.3
T7	Normal	1258	90	138.6	11.5	4.8
	Quick		96		10.9	4.2

Quick refers to the MICOL QUICK option - see compiler options

Program listing T1 :

```
900 PRINT CHR$(7)
1000 FOR M = 0 TO 9990
2000 NEXT M
3000 STOP
9000 RETURN
```

The other listings are obtained by adding the lines listed below :

Program listing T2 add :

```
1500 GOSUB 9000
```

Program listing T3 add :

```
1500 GOSUB 9000
5000 A = 0
5001 A = 0
 "  "  "
 -  -  -
5199 A = 0
```

Program listing T4 add :

```
1500 A = 0.0
```

Program listing T5 add :

```
1500 A = A + 1
```

Program listing T6 add :

```
1500 A$ = "Hello" + " there"
```

Program listing T7 add :

```
1500 GOSUB 9000
5000 REM
5001 REM
 "  "
```

To Apple2000 Best Wishes from
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Apart from MICOL BASIC programs being a little larger than their Applesoft counterparts the listings above show the advantages of a compiled language. MICOL BASIC lets you use as many comments as you feel is necessary without increasing the size of the compiled program - in Applesoft REMarks make the program larger and slow it down in most cases. You are encouraged to use subroutines in MICOL BASIC because such 'calls' are very very fast whatever the program size . This leads to modular programs that are easy to write read and debug. What is more MICOL BASIC has all those extra structured statements which add to the readability of your programs.

Small Quibbles

The first quibble I have is with their use of 'page 3' of ram memory ($0300-$03FF). Many Applesoft programs have small machine code routines which they call and these are invariably in page 3. Why couldn't MICOL have placed these and the new & vector in page 9 and moved LOMEM up a bit. Page 3 is taboo : many readers I am sure would agree but perhaps for different reasons!

The second is with the MERGE command in the editor which is really only an 'append' since the lines you 'merge' must be larger than those already in the editor.

VERDICT

MICOL Systems of Canada have produced an excellent structured language development system that also happens to be upwards compatible with Applesoft - well almost. Most of the 'boasts' referred to above prove reasonably justified. Any Applesoft programmer will within a very short period of time be at home with this system. For a little less than $50 you get excellent documentation, a good programmers development system which has a very fast compiler.

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Letter to the Editor

Dr Nigel Strudwick
Cambridge

Dear Mr Panks,

I am writing to you in your capacity as editor of Hardcore, in response to your appeals for comments. In general the current format is satisfactory and good-looking, but I must say that I have my reservations about the quality of some of the grammar and punctuation of the articles .....

However, in the spirit of "getting involved", I do not propose just to moan; rather, do you require the services of an additional sub-editor, proof-reader or whatever as I should like to be able to "do my bit" and help improve the magazine ?

Sincerely yours

[Reply]....

Thank you for your constructive comments on OUR journal, I welcome your offer of help and will by now have contacted you to discuss in what areas you can assist.

We always need the extra hands to improve the things we do, any member that can help share a task should contact Sheila Hirst by phone or post.

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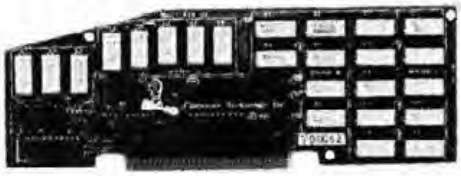

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OMNIS
SPECIAL INTEREST GROUP NEWS
A new idea from Blyth and Apple2000 for all OMNIS Users.

Once again the response from readers has indicated the neccessity of providing this Omnis/Apple2000 S.I.G.

We have received a large amount of mail from exsisting and potential users with queries and suggestions about setting up and enhancing Omnis applications.

Please feel welcome to participate in this joint venture between your club and Blyth. Just contact Keith Chamberlain at the Apple2000 P.O.Box.

A BIT ABOUT BLYTH

Blyth Software has, in six years, become an International Company. From it's Suffolk headquarters the Blyth team develope, manufacture, package and dispatch Omnis 1,2 and 3 for an increasing range of hardware. The technical Support team offer a help-line to all registered users of the products.

New Product News.

MAIL MASTER £99.00 excluding VAT.

MailMaster is a mailing list management system designed for business use. It is supplied as a library to work in conjunction with Omnis 3 and Omnis 3 Plus on the Macintosh and Macintosh Plus.

Some features of MailMaster:

»Multiple Contact names can be stored for each company and allocated to one of four user defined departments.

»Companies can be allocated to one of eight user-defined types.

»All reports, letters and mailing labels can be printed selectively by type, department, company code, county or grade.

OMNIS 3 PLUS

Omnis 3 Plus is a major revised and enhanced version of Omnis 3. Here is a selection of a few additional features:

»Ten segments per datafile giving around 160MByte maximum datafile.

»You can now 'exit and go to another application' with a new command.

»A new time field. Two new date fields, one from 1900-1999 the second from 1980-2079.

»Sort limit is now memory dependent and can be greater than 30,000 records.

»Button margin can now be removed to give a display of 70 characters.

»You can now link fields to obtain a text block with word wraparound.

»Omnis 3 Plus will now support Macintosh fonts.

Exsisting Omnis Users can follow an upgrade path to Omnis 3 Plus.

Strategic Developers Program.

S.D.P. is a comprehensive software developers program which was brought into operation jointly by Blyth Software and Apple Computers.

The objective of S.D.P. is to make contact with people who are professional in their own fields and believe that they will be able to create vertical market software designed to address specific management problems within their own industry. For example a Partner in an Estate Agent's practice set about creating an Omnis based application for the management of his own company and today is marketing the product nationally and making substantial profits.

Blyth Software can ensure excellent exposure for software created in the marketplace through its dealer network and Omnis Business Directory. Blyth may, in some cases, even consider direct marketing of the product.

In some situations we are able to offer, on loan, a complete Macintosh system with software, thus enabling the Developer to produce and market his product first. After such time he can make the necessary investment to acquire his own hardware, which as a registered software developer with Apple, he may be entitled to purchase on their commercial terms usually only available to an established software company.

There is not enough space to provide full details here nor can we give evidence of the numerous successful projects which have been brought about, so if you would like to find out more, please phone our offices for an application form.

Mr David Ainslie
Christchurch
Dorset.

I am using Omnis 3 on an Apple //e and I would like my staff to be able to search the database without actually accessing the search format. For example, they enter a value such as 'Smith' and all the Smiths are output in a report. Please can you help?

Answer

There is a method of achieving what you require. Here is an example which you can modify to suit your needs. If you had a file 'FILEA' with two normal fields 'ANAME' and 'ACODE', define screen 1 with these two fields with normal attributes. Create a file 'FCONST' with fields 'CNAME' ,and CCODE' which is a sequential field. Define screen 2 with these two fields. Set up a calculated search 'ANAME' = 'CNAME'. Then define a sequence for S.

G2/M CONST/F01'1'I/E?/G1/M FILEA/AS SEARCH/S/R/TS;Y/N

Define a sequence for Y with just a message 'RECORD FOUND'.

FILEA is normally the main entry file e.g. Client Details.

OMNIS
SPECIAL INTEREST GROUP NEWS
A new idea from Blyth and Apple2000 for all OMNIS Users.

Technical Enquiry

Mr George Gray
Milton Keynes

I have developed an application with Omnis 3 on the Mac 512k. I have designed a report with two records across the page and would like to list the records from top to bottom like a telephone directory, rather than the present method of listing from left to right. Is there any way of achieving this ?.

Answer

Yes, here is an example sequence which will list by county.

Initially, decide how many detail lines will be printed per page. The figure is arrived at by adding the number of lines within the heading to the top and bottom margins and then subtracting this figure from the lines per page (the example has 50 detail lines). This means that 100 records will be printed per page.

Set up the report parameters as normal, i.e. 2 records across page, etc. The procedure will read in 100 records at a time, storing the sequence numbers in field #1. The first record for this report will be printed in the left-hand column, alongside this the 51st record will be printed. On the next line would be the second and the 52nd record, etc, etc.

1. The report can only be printed in indexed field order.
2. The procedures uses the sequence number of the records. If the file does not include a sequence number, then add one (this does not use up any additional disk space).
3. Set #12 to the number of detail lines printed per page (line 5 of the sequence).
4. With slight modification to the sequence a search format could also be included.

THANKS TO ODETTE AT BLYTH FOR PUTTING TOGETHER THESE PAGES

KEEP SENDING YOUR QUESTIONS IN.

APPLE2000 uses OMNIS 3 on the Macintosh and Apple // to maintain the membership records and to provide the FORCE accounts. We have found both programs excellent and in the next issue will explain how our membership records were changed from Omnis on the // to Omnis 3 on the Macintosh.

We would like to register our thanks to the OMNIS Team for providing the software, advice and for the support they give to our group.

Commands

```
Select Output (prompted) []
Select Report [RCOUNTY]
Set main file to FCOUNTY
* Set #12 to number of DETAIL lines per page *
Calculate #12 as 50 (0 dps)
Calculate #13 as 0 (0 dps)
Repeat
   Clear: Main file # fields from 1 to 1 The array
   Calculate #P as 1
   Find on CSEQ with exact match [#13]
   Next on CCODE
   Repeat
      Calculate #1 as CSEQ (0 dps)
      Calculate #13 as CSEQ (0 dps)
      Calculate #P as #P+1
      Next on CCODE
   Until #12*2<#P!(CSEQ=0)
   Calculate #14 as CSEQ=0 (0 dps)
   Calculate #11 as INT(#P/2) (0 dps)
   Calculate #P as 1
   Repeat
      Find on CSEQ with exact match [#1]
      Print record
      Calculate #P as #P+#11
      Find on CSEQ with exact match [#1]
      Print record
      Calculate #P as #P-#11+1
   Until #P>#11
Until #14
Print totals
```

DISC ZAPS AND ALL THAT (Part 4)

by EWEN WANNOP

Make it Grow with Branches

Those of us who cut our teeth on DOS 3.3, first saw Prodos as a confusion of pathnames. We never seemed to get the right one entered, and could never seem to get even a simple Catalog of a disc in another drive. Forever was the message 'PATHNAME NOT FOUND' being displayed. However, beneath the seeming difficulty of such normal commands, lies a powerful operating system. It leaves DOS 3.3 way behind with its speed, versatility and power.

Evolution of ProDos

To explain the evolution of Prodos, first let me take you through a bit of history. When Steve Wozniak first wrote the routines for Apple DOS, there were only single density 5.25 inch drives around. With a maximum of 40 tracks on these drives, there was a practical limit to the amount of data on each disc, and so a limit to the possible number of sectors that could be accessed by DOS itself.

This served us well for a time, until we tried to hook on a hard disc drive. We could only format the hard disc as a number of volumes the size of a normal 5.25 inch disc, rather than formatting the drive as one large disc.

The reason that only such a small number of sectors was available to the DOS system, lay in the way that the Disc Map and VTOC was constructed. This meant that there was simply no room to expand this map beyond the 40 tracks.

DOS had some other limitations as well, the catalog structure allowed only a few file types to be defined, and no other information could be stored apart from the filename.

It was because of such limitations, and also because Pascal discs had already allowed a more flexible approach to disc structure, that Prodos came into being.

To be more accurate, SOS came into being first, and Prodos followed. SOS is the operating system for Apple /// machines, and Prodos is an extension of this system. In fact Prodos can read SOS discs, and some Prodos discs can be read by SOS. The main difference between the two is that SOS files have different file type values.

Prodos allowed much more information to be held about each file in its directory entry, and more importantly, its disc map allowed volumes of any size to be mapped. It was thus possible to build a single volume of any size on a hard disc, regardless how big the hard disc was.

The actual information at sector level on a Prodos disc, is written in exactly the same way as any Apple disc, whether it be DOS, Prodos, Pascal or even CPM. This means that our DISK MANAGER program will read any disc sector on any of these disc types.

However, there the similarities end, and we find the individual structures of the different discs vary.

Disk structures explained.

Held in the information embedded on each sector, is the track and sector number of that particular sector. As we read each sector spinning under the head of the disc drive, we must process and store the information gathered.

This takes some time and when we are ready to take in the next sector, we will find that it has already passed underneath the head and we must wait until it comes around again.

For this reason, DOS does not read the sectors in ascending order, but uses an interleaving technique to achieve the fastest sector by sector read. It does not use the actual sector numbers on the disc, but uses a lookup table to determine the actual sector to be read, from the target sector given.

SOS, Prodos and Pascal discs use a different interleaving table than DOS, and CPM uses yet another. This means that Prodos sectors are not compatible with DOS sector numbers.

Using Disk Manager under ProDOS

DISK MANAGER is written under DOS 3.3, so to access a particular sector on a Prodos disc, you will have to determine the actual DOS sector required from Table 2.

Just to complicate things even further, SOS, Prodos and Pascal discs, store information in Blocks of 512 bytes, rather than the 256 byte sector of DOS. So to read a given Block on a Prodos disc, you will need to actually find the track required, and then read in two sectors in turn.

Prodos discs start with Block 0 at Track 0 Sector 0, the Blocks then ascend numerically till the limit of the disc is reached.

Because each Block is 512 bytes long, you can only get 8 Blocks on a track. To find the actual track and sector of an individual Block, take the integer of the Block number divided by eight as the Track, and then taking the remainder refer to Table 2 for the Sectors. The two DOS sectors are the low and high parts of the block respectively.

TABLE 1

```
Track = integer(Prodos Block/8)

The remainder is the Prodos Block within that track.
```

TABLE 2

```
Prodos Block; $0    $1    $2    $3    $4    $5    $6    $7
Dos Sectors : $0,$E $D,$C $B,$A $9,$8 $7,$6 $5,$4 $3,$2 $1,$F
```

Having now explained how to use DISK MANAGER to look at Prodos discs. I will give a brief rundown on the layout of these discs. This will allow you to have a first look at your Prodos discs, but I will need to leave till next time a more detailed look at the Prodos Directory, as it can be quite complex and overwhelming at first sight, but this is of course its great strength and power.

I shall be referring to the Prodos Block numbers, use the above Tables to calculate the actual Track and Sectors required. These are the usual Blocks that Prodos uses. It is possible for them to be in a different place on the disc, but for the moment we will assume we have a normal Prodos disc in our drive.

BLOCK 0 is the boot-strap loader for the file 'Prodos'. If Prodos itself is not present on the disc, then a message is given: "*** UNABLE TO LOAD PRODOS ***".

BLOCK 1 is a boot-strap loader for SOS. If the disc is booted on an Apple ///, then a search is made for 'SOS.KERNEL'. If found this is loaded instead of Prodos. This Block may not be present on all Prodos discs.

BLOCK 2 is the start of the Directory. The Directory normally takes up four blocks, Blocks 2 - 5, but can be of any size.

BLOCK 6 is the Disc Map. For a 5.25 inch disc, there will only be this Block allocated for the Disc Map. For larger Volumes it can be of any length.

BLOCK 7 is the first Data Block of the first file on a normal Prodos disc.

BLOCK 279 is the last Data block on Track $22 of a 5.25 inch disc.

Each file is constructed in exactly the same way. Unlike DOS, only the directory entry is changed to denote different filetypes. There is an Index Block associated with each file longer than one Block, this is analogous to the Track Sector list of DOS. The Directory entry holds considerable nformation on the file, with entries such as filetype, access rights, date and time of creation etc.

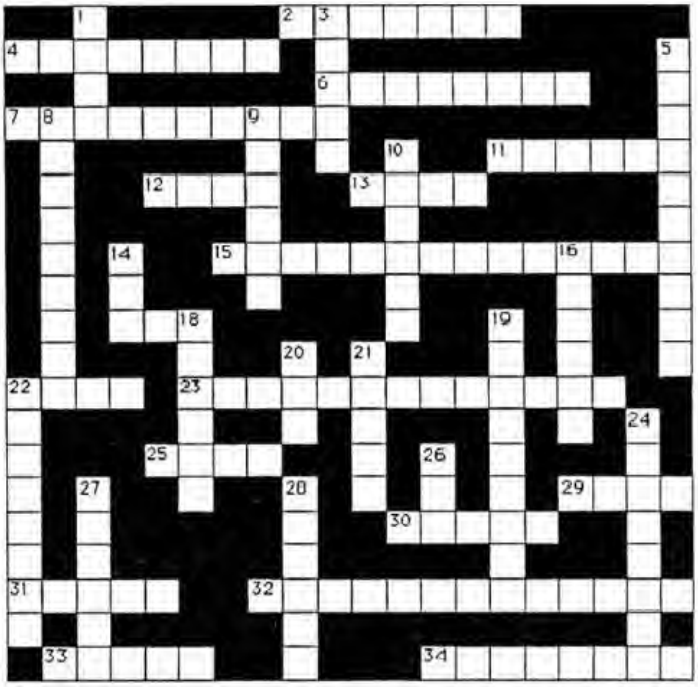
The Directory itself can include entries to further directories, these are stored in the same manner as file entries. It is thus possible to nest sub-directories to any depth. It is this possibility that of course is the power of Prodos, and hence gives us the need to use Pathnames. Discs are referred to by Volume Name, not by Slot and Drive, and sub-directories are then referred to by their Directory Name. A Pathname thus actually tells us the route that Prodos must take down the tree-like branches of the Directories to find an individual file.

I think that this is a suitable point to leave you this time.

Coming in the next episode

Next episode will cover the actual construction of the Prodos Directory. This will give you the clues necessary to change filetypes, to enter times and dates and to unlock and lock files. I will also give you an introduction to the MLI. This is not a Mysterious Language Insight, but the very powerful tool of the Machine Language Interpreter lurking within Prodos.

PRIZE CROSSWORD
by Tom Wright



Across
2. Often heard gentleman of Westminster
4. Continuously equidistant
6. Slider in organ controlling set of pipes
7. Outsold 1-2-3 in February
11. Golf club for long strokes
12. Gunpowder
13. Bill of fare
15. Pictorial drug in slab form
17. Found on most public roads
22. Break or cut stone
23. Change size
25. Put Basic information on Diskette
29. Encountered in spoken and written forms
30. One of the ways in which variables are organized
31. Dive deep
32. Two ways
33. A two-rail railway line
34. Collects information into serviceable form.

Down
1. Usually done by an error handling routine
3. Take apart and analyse
5. Set of writing symbols
8. Printer control card by Rosco
9. Go back
10. Ascertain the truth or correctness
14. Part of diskette often reinforced
16. Seen on railway wagons
18. Twine
19. Watery map
20. You put this on the Apple //
21. One cycle per round
22. Four-wheeled vehicle
24. Programs stored in ROM
26. Set counters with this
27. Appeared in a recent T.V. series
28. Several on a violin

Send answers to P.O.Box. First correct solution receives goods to the value of £12.00

An Update on the Bulletin Board

by Tony Game (Sysop)

BABBS is out of hospital !!!

Much has happened to Babbs since my last report. We had an incredible number of hardware problems which seemed to come one after the other in a nightmare succession. However hopefully these are all behind us now. Apologies to those loyal users who found themselves having to re-logon again and again, as one thing after another deleted the files. Your patience was appreciated.

The most significant development has been the replacement of the Dacom modem by a new, all singing and dancing WS3000. This now supports all line speeds from 300/300 to 2400/2400, including 1200/75. As with most innovations, there have been teething problems, but the set up is now working well, and you should have no problems in coming on at any baud rate up to 2400.

Since almost everyone has V23 which is 1200/75, the Prestel standard, many of you will be able to use this speed. Naturally your terminal program must support it, and most American based packages don't unfortunately. However lucky users of Data Highway do have it, and should certainly use it, since reading at 1200 is a very different thing from reading at 300. The 75 baud sending in is no problem, since very few typists can exceed this speed anyway, and most people will notice no difference when typing in. The one proviso is that you should not try to upload messages at this speed, since this takes a very long time.

Basug area (or room as it is called on Babbs), is now a closed user group for 'APPLE 2000' members only. Do use it for your suggestions, problems etc. It is one of the fastest and best ways of making your presence in the club felt. If you just use that one room, and download the new messages into your buffer before leaving, you will find it only takes a very short time. Then you can prepare your answers off-line, call in again, and send them up automatically which again is very quick. Used like this Babbs is not expensive as so many people think, and considering how quickly you are likely to get a solution to any problems you may have, it is very good value. I use this just as an illustration let me hasten to add, because there are rooms ranging from Pascal to Hobbies to Insults, and your participation in any of them will be very welcome. Furthermore if the existing list doesn't present scope for your pet interest do let me know and, if there is enough support, another room can be opened.

Some of the rooms are inevitably little used at present, but I hope they may find supporters eventually. Esperanto, and Disabled Users are a couple that are unused as yet. If you know of anyone who could benefit from the Disabled Users area, do let them know it is there. If you speak Esperanto then a message from you might well set the ball rolling. At the moment the only Esperanto there is the computer language Basicode!

It is intended that all the listings that are published in 'APPLE 2000' shall be present on Babbs for you to download, and so save you the effort of typing them in with the inevitable dreaded syntax errors! You will find these listings as files in Basug room. Many of the other language rooms, and also Adventurers, have files for you to download, and the list will gradually grow as material comes in. To wet the appetites of those of you addicted to Infocom adventures, there is a "cheat" file for Hitch hikers, which an Italian caller has uploaded for us. In order to download files you will need to use Ward Christensen protocol, or X-modem as it is often called. Consult your terminal program manual to find out how to do this. As always if you run into problems do leave me a note and I will try to sort things out.

In the month that the new Babbs has been running we have had 1500 callers, from Australia to Iceland, and Babbs welcomes them all, and hopefully presents an image of a forward looking, and active club. Do join us and help to make sure that this image is not only maintained, but constantly improved, so that your bulletin board remains, as it has always been, one of the very best in the country.

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Celtip Computers were founded in 1979 by Tim Yates & Andy Starkey, In those days you could nip down to Microsense in Hemel Hempstead, buy two Apple][+'s and you were an authorised dealer! Since then the company has moved from a part time business operating from Tim's house to its present level.

Celtip are the only authorised Apple dealer in Hereford & Worcestershire. They are Apple only dealers selling mainly to small & medium sized businesses in the local area, although customers range from one man bands to multi-nationals, from Canterbury to Preston.

Over the years Celtip have gained an enviable reputation for personal & prompt service. Many of their sales come from personal reccomendations or from existing customers upgrading or expanding their systems. As well as selling & supporting Apple systems Celtip offer a Laser printing service for Macintosh owners which is used by, among others, an author of economics text books, an estate agents, the English Skateboard Association, and a local G.P.

Celtip have had close ties with local users groups and have supported meetings by the Midland Mac Club, MidApple & Apple 2000. They were also prominant at Apple Show '86, The Midland Mac Fest, and Apple 2000's AGM. Many of their customers have since become Apple 2000 members.

If you are are in the Kidderminster area at any time pop into Celtip Computers for a chat & a coffee. They'll be pleased to see you.

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GRAPHICS SPECIAL REPORT

REPORT BY OUR CORRESPONDENT N.HUNTER

GRAPHICS AND LAYOUT BY I.KNEZOVICH

INFORMATION FROM TODAY NEWSPAPER

PLAY SPOT THE MAC TODAY !!!

EXCLUSIVE

EDDIE SHAH is renowned for having dragged the UK newspaper Industry into an exciting present by his perceptive use of advanced technology.

His colourful TODAY has already established itself as the worlds first fully electronic newspaper using satellite data links, laser typsetting and electronic terminals. Entrepreneurial Eddie Shah and his production team are currently using several dozen 512K Macintosh machines to speed up the daily edition of his excellent TODAY newspaper.

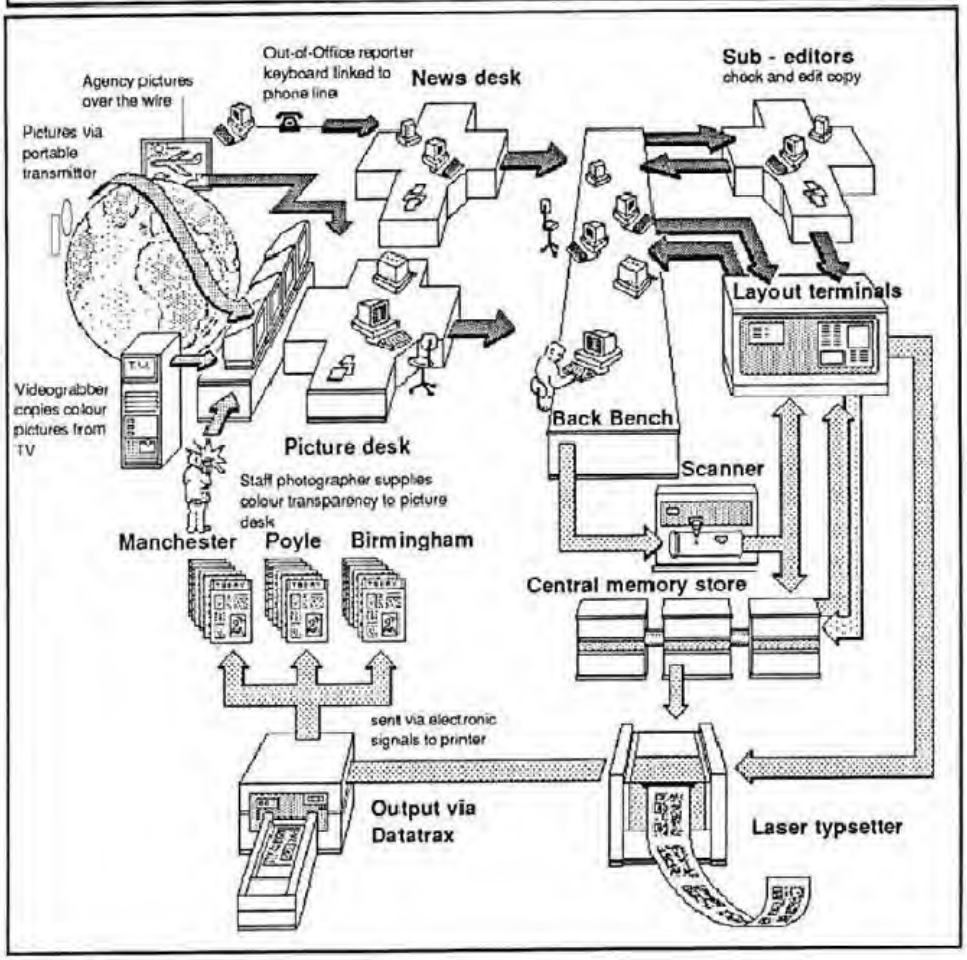
More than thirty Macs have already been installed in several departments, and the Chairman has a MacPlus for his own use. Much of the burden of typing in the Secretarial department is carried by Macs used as work processors. Three 512K Macs are linked to two Laserprinters in the Graphics Department and assist in the composition of type styles and sizes.

Mike Williams, Head of Graphics told APPLE 2000 that they are very happy with their 512K Macs: "They use standard software - MacDraw, MacPaint and MacWrite for producing limited quality graphics. We use commercial artists for high quality artwork. The software was chosen after a careful evaluation in preference to other packages such as Jazz or Chart. MacDraw for example, is used with MacTablet to produce the diagrams of Bridge and Chess Games which we regularly feature."

"The Macs are particulary useful for moving type around and fitting type blocks into areas around graphics. Changes of typesize or typeface can be accomplished quickly and this enables the fast production of high quality typesetting with our two Lasers which are networked to the Macs".

It is reassuring to see that Macs have been chosen to work alongside the most advanced technology used in newspaper today. As further Laser fonts become available and more sophisticated imaging sytems are made compatible with the Mac, APPLE 2000 readers can expect to see more and more Mac generated copy in their morning newspapers.

HOW IT WORKS



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(TYPE)SETTING THE RECORD STRAIGHT.....

PC User Group Chairman Ian Fraser claimed a 'first' when his Group of IBM PC enthusiasts produced the 'first' in-house magazine to use desktop publishing (PC Business World, 10 June 1986). What a pity they didn't ask BASUG -Apples premier UK User Group!

"We have been desktop publishing for the past six months" Jim Panks, BASUGS's Chairman told us this week. "Our magazine Hardcore has been Laserwritten since before Christmas, so we were a bit surprised to hear of Mr Fraser's claim so late in the day."

"Our December issue was shipped six months ago, and we have now published four full issues of Hardcore with the new technology. We are planning a really special fifth bumper issue which will be out in August".

"I guess we are so far ahead of the IBM users in desktop publishing, they didn't even know we were in the same game" remarked Panks wryly. "We enjoy the benefits of the Mac's bit-mapped screen which has a lot to do with making full-page layouts practical. Each issue we produce gets better and better, and our members are delighted with the improvements."

BASUG use a 512K Macintosh with a range of text and graphics programs set through Aldus Pagemaker software downloaded to an Apple LaserWriter for their bi-monthly magazine Hardcore.

(This is a copy of the press release we sent to all computer journals - PC Business World needless to say forgot to mention it !!!)

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RECKONING WITH THE FORCE or Who hasn't read the Manual? by Ewen Wannop

BT Gold, or as Apple 2000 members know it, THE FORCE, is not the friendliest of Systems. BABBS, our very own Bulletin Board, must take the laurels for that. Beneath that ever present '>' anonymous prompt lurks a number of facilities waiting for you to use. You will find most of what you need to know about these, in the pages of the Force Manual obtainable from the software library. The rest you can get from the INFO files.

To see a list of the INFO files, type at the '>' prompt, INFO INFO. However, as I have gained some experience through solving other peoples problems on the Force, I felt some of these functions could be explained in simple language to those who are still foxed by it all.

THE 120 TRAP.

For some obscure reason, the Dialcom software used by BTG, will not accept more than 120 characters in any one line before a carriage return is encountered. In practice, most times you will enter a carriage return after each 80 or less. If you exceed 120 however, you are rewarded with a bleep for each one over the limit. A carriage return entered at that point will truncate the line to 120.

Entering text online therefore usually presents no problems, but if like me you prepare text offline for transmission, it is easy to have missing or garbaged text as a result of unsuitable files. An word-processor will not necessarily put returns at each line end. That old standby Applewriter II, and in fact many other word processors including those for the MAC, do not format each line with a carriage return, they only put one in at the end of each paragraph. You must get in the habit of actually typing in a return at each line end as you go, and not let the line wrap round on the screen.

Some programs will format each line with returns. My own program Data Highway, enters returns at each line end when using the <E>ditor. It also enters returns into a <L>oaded file when <V>iewing, and you may <S>ave the formatted buffer to disc after viewing for later transmission.

So, the moral is, keep it to 120 characters or less.

THE '>' PROMPT.

Just to get you all into the swing of things let me introduce you to a few of the many commands. There are many more of them than this however, but you will need to get INFO on them to see what you can do. At the anonymous '>' prompt there are a number of commands available. You will all know of course MAIL and PASSWD, but did you know these others:

CONGRATULATIONS to Apple2000 from:

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>WHO Just in case you had forgotten who you were.
Returns A.N.OTHER (<S84-4>BSG999)
>F Gives a list of all the files you have, will show you how your block storage is being used. FILENAME 001 is one block used ...
>DEL FILENAME Will delete that file. Do not delete files called NUMB, MAIL.FILE, CID or PARAM.INI, or any files named like this, *FILENAME*. All others are fair game to reduce storage charges. Telex users should delete the file INPUT, as this is a copy of all your Telex's sent.
>L Also gives a list of files, and tells you who you are
>P Gives a wierd and wonderful list of data. Good to impress your friends that you know what you are doing on the FORCE!
>R ? Gives a list of all the useful programs you may <R>un that are on BTG.
>R NAME Runs one of these programs.
>U Tells you how many people are on System 84 at that moment.
>TY FILENAME If the file is an ASCII file, this will type out its contents to the screen. Look at NUMB, *MAILSAVE* or PARAM.INI.
>ED Enters the dreaded Editor....

THE DREADED EDITOR.

Most of you will prefer to use your own word processor rather than use the clumsy editor provided by BTG. It is clumsy, because of course you cannot use proper screen handling when dealing with a scrolling stream of data. BTG use an editor similiar to that of the CP/M ED. If you know that particular monstrosity you will have no problems, for the rest of us it is a mine field coated in treacle. With a little patience however, you will be able to use it for some simple editing. The editor is line based, and uses the concept of a pointer pointing to the current active line. This pointer may be moved about in various ways to move you back and forth through th text.

I will follow through a typical creation of your PARAM.INI file. The completed file will set up the FORCE on entry, so you do not have the interminable 'MORE' printed while reading your MAIL. All the text in brackets is descriptive of your actions or what you will enter. Your screen should look similiar to this as you go along.

>ED (return) [enters the editor]
INPUT [asking for you to INPUT copy]
MAIL NOMOR HARDCOPY (return) [your input] (return) [blank line to finish INPUT and reenter EDIT]
EDIT [main ED prompt]
T (return) [this will move the pointer to the TOP]
[B (return) would take it to the bottom]
P10 (return) [prints the next 10 lines of the buffer]
00001:MAIL NOMOR HARDCOPY BOTTOM
T (return) [takes you back to the Top]
N1 [lists the next line which will be line 1]
[if more than 1 will advance by that amount each time]
00001:MAIL NOMOR HARDCOPY [the listed line]
C/NOMOR/NOMORE/ (return) [<C>orrects the spelling mistake in NOMOR]
00001:MAIL NOMORE HARDCOPY [the corrected line]
T (return) [back to the TOP]
P10 (return) [see that all is well]
00001:MAIL NOMORE HARDCOPY BOTTOM
SAVE PARAM.INI (return) [save the correct file as PARAM.INI]
File already exist. Ok to replace?
Y (return) [if the file existed already]
>F (return) [will list all your files]
PARAM.INI 001 17/06/86 19:29 ASC D W R
MAIL.FILE 001 23/01/86 16:43 UFD D W R
NUMB 001 01/04/85 06:44 ASC D W R
>TY PARAM.INI (return)
MAIL NOMORE HARDCOPY
> [back to the prompt having created the file PARAM.INI]

It is not really so bad after all. Just remember that there is a pointer to the current line. You can put it to the top <T> the bottom <B> or move it around by any number of lines at a time <Nxx). Print any number of lines from that point <Pxx> and change anything <C/OLD/NEW/>. You can also move the pointer up <Uxx> or go straight to a line with <xx>. <Dxx> deletes a number of lines from the pointer on. You can insert a new line <I(space)NEW TEXT> and finally <OOPS> which ignores the last command or change you made.

FINAL WORD.

This is not an exhaustive list of all that is available, there are lots more things you can do. Remember INFO INFO will lead you to lots of help files. To read one type INFO HELPNAME. If you have problems, contact or MAIL John Lee the Sysop (BSG001) for system help or Seth Proctor Force Admin (BSG100) for billing help.

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Comparison between RamWorks and RamFactor

	RamWorks	RamFactor	Z-RAM
Computer	IIe	IIe/II+	IIc
Slot	Aux	Any (except 3)	Internal
Ram	Disk based	Eprom based	Disk Based
Software Standard	Yes	Yes	Yes
80 Columns built-in	Yes	No	N/A
Battery Back-up Option	No	Yes	No
AppleWorks Expansion	All Versions	V1.3 (or later)	All Versions
Maximum number of records in DataBase	15,200	5,300	15,200
Maximum number of lines in Word Proc.	15,200	5,300	15,200
Expands Clipboard	Yes	No	Yes
Printer Buffer	Yes	No	Yes
Auto-segments large files	Yes	Yes	Yes
Memory Upgrades Available	Yes	Yes	Yes (256 to 512K only)

If you have a IIc or a II+, then the choice of Ram expansion is self-evident; however, if you have a IIe then the choice could be between RamWorks and RamFactor.

Both cards are equally compatible with modern software, however RamWorks offers far greater power and benefits for AppleWorks. Also, because the RamWorks (and Z-RAM) benefits are supplied on disk then upgrades are readily available. (The disk performs a once-only modification to AppleWorks). Another point to consider is that using RamFactor you will require a separate 80 column card, so taking up two slots.

If your prime requirement is to run AppleWorks, then RamWorks is the best choice by far.

However, if you need to switch between various operating systems or require battery back-up of data or wish to convert your IIe to 16 bit operation as soon as software is available, then RamFactor would be the choice.

Ordering Information

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65C816 16 Bit Card **£159.00**

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512K Z-RAM **£419.00**

640K IIc
(Fitted with 512K Z-RAM) **£899.00**

Memory Upgrades
256K RamWorks to 512K Upgrade **£60.00**
512K RamWorks to
1 Meg Upgrade **£140.00**
256K RamWorks to
1 Meg Upgrade **£199.00**

256K RamFactor to 512K Upgrade **£60.00**
512K RamFactor to
1 Meg Upgrade **£100.00**
256K RamWorks to
1 Meg Upgrade **£150.00**

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IIc System Clock **£79.00**
Timemaster II H.O. Clock (IIe/II+) **£129.00**

Low Cost Options (software)
Ram Drive IIe (Dos 3.3 & ProDos) **£29.00**
Ram Drive IIe (Pascal) **£29.00**
CP/M Ram Drive **£29.00**
Visicalc Expander Disk **£29.00**
AppleWorks on II+ Disk **£29.00**

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(80 Col Card for II+) **£139.00**
Z-80 Plus card – inc CP/M (IIe/II+) ... **£139.00**
Powerful Power supply for IIe/+ **£75.00**
12-Bit, 16-Channel A/D Converter ... **£319.00**
8-Bit 8-Chan A/D + D/A Converter ... **£199.00**
Phasor Music Synthesizer **£179.00**

Other Software
PinPoint (IIc or Enhanced IIe) **£69.00**
PinPoint Spelling Checker
(Reqs PinPoint) **£69.00**
PinPoint Ram Enhancement Kit **£19.00**
PinPoint Modem Enhancement Kit **£19.00**
PinPoint Printer Enhancement Kit **£19.00**

Simple Mail-Merge for Appleworks **£29.00**
Graphworks – Graphs
(for Appleworks) **£79.00**
ProFiler – Database software **£99.00**

SuperCalc 3a –
Spreadsheet software **£170.00**

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I'VE FLIPPED - A user's view

By Richard Wilday

Yes it is as good as they claim. At first sight the one MEG. board seems a bit extravagant. But if you realise that you can use it to act as two extra 400K disk drives, for my purpose its worth its weight in gold plated contacts.

I first saw the board about two months ago being demonstrated by Dave Ward and asked whether it might solve my software problem that I had discussed with him on previous meetings. The answer was to give it a try!

The software in question is part of my configured Apple //e which works in conjunction with a plotter and a graphic tablet to produce cut-out vinyl letters and symbols. This is marketed in this country for an America Company by Spandex Ltd. There are four separate programs for the most part these are written in Basic. This would not present a problem was it not for the annoying fact that a dongle resides in slot 2, and part of the programming is embedded in this black box. It's annoying because its unnecessary. Firstly because it takes up a very valuable slot. Programs that require a printer and the card must be in slot 2 (i.e. Pascal) can not be run on the machine. Secondly there is no need for it, as the programs themselves, which are copyA, are useless without the additional equipment which can only be obtained from the manufacturers.

The four programs consisting of Job Save, Job Display, Logo Plotter and Logo Stringer have to be loaded into the Apple each time they are needed which due to their length take about 2 minutes each time. I have increased the speed of this slightly by adding a faster DOS and removing unneeded parts of the programs, but anything more ambitious than this produces disasterous crashes.

So there was the problem could the Flipper improve things? Dave explained that the card could be divided into a number of work areas, up to four by coincidence. So we loaded each of the areas with one of my plotter programs and Voila! I could access each of the programs within 10 seconds, and the Apple would then operate as normal accessing the disk drives for work disks when needed. The work areas were then backed up onto the Flipper's own formatted disks. These can then be loaded at the start of a working day taking about 4 minutes, and thats it! With the the programs on the Flipper the Apple can still be used as a standard machine (except for that dongle) at any time without interfering with the loaded programs. When I need the plotter programs or change to another, I just control, open apple, reset and PR#7 (my Flipper is in slot 7) and there are my four programs.

This saves me on average about twenty minutes each working day which is a -

FLIPPING GREAT IMPROVEMENT !!!

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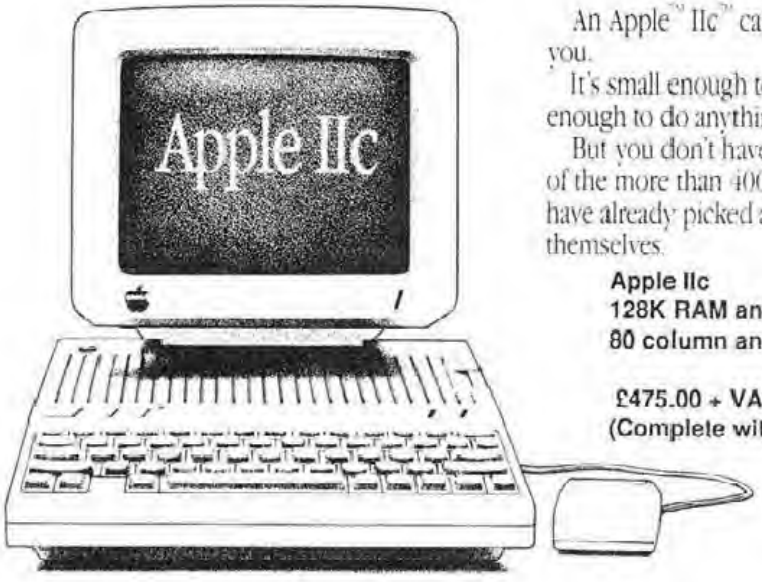

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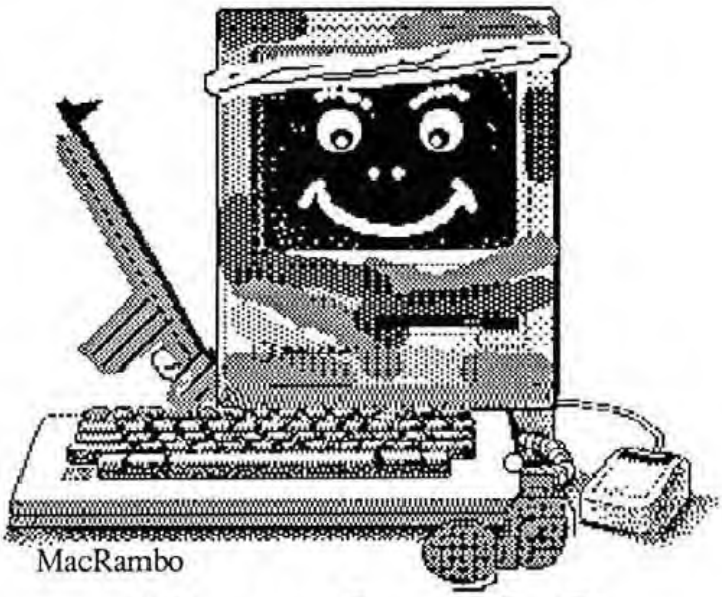

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CLUB NEWS

by Tom Wright

Your committee met again on Sunday, 22-6-86 at Bewdley Safari Park would you believe, no not in the monkey enclosure. The reason for choice of this venue was that we have to ensure that Ivan Knezovich is able to attend and he is very hard pressed for time during the summer season. Fortunately costs worked out to be the same for this venue as for the more usual Luton one, and Ivan provided very pleasant facilities not least of which was the opportunity to watch him putting his sealions through their paces during one of our break periods.

A very busy day covered a great deal of ground and was mainly occupied with development plans for the new group image, ie APPLE 2000.

Nick Hunter is doing great work on the P.R side and has picked up and corrected a spurious claim by I.B.M that their user group is the first to produce a user group magazine via Desktop publishing, cheeky lot ! but then you wouldn't expect I.B.M to be up to date properly would you ?

Irene Flaxman is maintaining a close check on the group's finances and judging from her reports it looks as if we continue to maintain recent progress.

Ewen Wannop and John Lee (the new Force Sysop) have invested a great deal of effort in updating the Force, and their efforts have already started to produce visible changes. If you haven't looked in lately you might get a surprise (eg BSGNEWS etc).

Keith Chamberlain has been busy updating the database and things on that front are obviously well controlled, puts in a lot of hard work does our Keith.

Graham Attwood's activities have included some excellent work on the software library which is being continually updated and improved, for the time being however his other activities will have to remain classified, but watch this space!

Among other things the committee decided to buy a hard disk for use in the production of the magazine. For some time BASUG (as was) has been seeing the steady improvements in the magazine which have been achieved as a result of Jim Pank's efforts. Apart from the wear and tear on his equipment however, Jim has been struggling with a severe production bottleneck in the form of 400k drives which have resulted in the magazine requiring an enormous amount of Jim's time, hundreds of hours per issue in fact. The only way to eliminate this bottleneck was to go to a hard disk so it's a worthwhile investment for everybody. Jim will be upgrading his Mac to Mac+ standard at the same time so we will all see a less tired James at meetings (is that a good thing I ask myself ?).

We all hope to provide you with some pleasant surprises in the near future and will try to keep you informed.

LOCAL GROUP NEWS

The last two months have been busy for me, in between chairman Jim bashing me on the head with his blue pencil, the committee threatening horrible things if I didn't start to use a modem, writing bits for the magazine, a committee meeting, several enquiries about this column, work for my own local group, work for my professional association, and not forgetting earning a living, this column has been gradually pieced together. All together now, ah shame shut up and get on with it Wright.

I have received a number of enquiries from Apple users who were seeking group locations or wanting to start groups. All enquiries have been answered (if,you have written and not yet received a reply it's either inthe post to you, or the enquiry hasn't reached me yet). One enquiry included seeking access to BABBS and potential guest speakers for a group.

Several enquiries concerned Apple's new machine but all I was able to say was that like the enquirers, I hope Apple extract their digits and get it right this time.

You will find a revised telephone number for the Liverpool contact Irene Flaxman together with two new contacts one of them for the formation of a new group included in the list of group contacts.

CAMBRIDGE - NEW GROUP OPPORTUNITY Ian Archibald is interested in the formation of a group in the Cambridge area and would like to hear from any other Apple users in the area. As a new local group opportunity please tell everybody that you know, even if (perish the thought) they are not Apple-2000 members. Ian can be contacted on [illegible] Venue, format and frequency of meetings will be agreed as soon as sufficient people get together.

BRISTOL As uncle Ewen described it, the last meeting of B.A.U.D was the one year'th anniversary of the resumption of this eight year old group. About a dozen people turn up at meetings which are held (scouts honour) at the Bristol Maternity Hospital on the 7th of each month, unless that date is a Saturday or Sunday in which event the nearest Friday to the 7th is chosen (must be a clever lot in Bristol if they understand that). Meetings are not rigidly organised and everybody enjoys themselves chatting. A charge of #1.00 per head is made at each meeting to cover hire of the venue, coffee and other goodies. If you're in the Bristol area give them a ring.

WEST MIDLANDS MidApples June meeting was marred by the announcement of a member's death two weeks prior to the meeting, however despite the bad news Bob Sather of Dark Star provided one of the most interesting demonstrations that the group has seen. The Snapshot card was shown to be extremely versatile and supporting software, particularly the Shuttle was most impressive. Bob told the group that while the Snapshot card is not currently compatible with any of the II series accelerator cards, Dark Star are attempting to negotiate with accelerator manufacturers about the modification that would be required to achieve compatability, good luck to them, great products. MidApple's July meeting will include a Communications presentation by William Watson, and the August meeting

will feature a Printer Fair. The group's members include a range of business and leasure Apple users.

MANCHESTER Max Parrot tells me that the group's last meeting was fairly successful with 20 members attending. The group will not be changing its venue which will continue to be: STAFF HOUSE, UMIST, SACKFIELD STREET, MANCHESTER, M60 1QD. The group meets at 8.00pm on the last Thursday of each month. Anybody going along for the first time will be excused the attendance fee of #2.00 which is otherwise payable. There is no annual subscription to pay. Membership interests comprise a mixed range of Apple and I.B.M (please excuse the bad language) and meetings are informal.

LIVERPOOL As you saw in the June issue of Hardcore the first meeting of the Liverpool group was a great success thanks to the efforts of all concerned including Computer City and Symbiotics. Unfortunately Blyth Software cancelled at the last minute, and Apple U.K did not put in an appearance. No meeting was held in June but Irene Flaxman tells me that the next meeting will be on 17-7-86 at the Widness shop (78, Victoria Road). Main topic will be Desktop publishing. Sounds as if Apple users in the Liverpool area have a good group going, why not give them a ring and join in ? Personally I can't help wondering if Apple's failure to arrive is a sign of the real measure of their commitment to better relations with user groups. Good job that the business and leisure EQUIPMENT BUYERS in the groups have people like Owen Hargreaves, Symbiotics, and Irene around.

CROYDON GROUP To prove the point about informal meetings, Croydon's June meeting included a presentation on PageMaker by Peter Jarman (not Omnis 3 as previously reported), apparently everybody found Peter's presentation interesting and enjoyable. July 17th will see a guest speaker presentation on alternative languages. The group has an interesting newsletter which features a competition for designing a paper/card model via a spreadsheet/word processor. Although there is not normally a meeting in August member's opinions about this are to be canvassed in the newsletter so check with Graham.

LONDON MACINTOSH GROUP This group normally has about 30 people at each meeting but there are another 30 with interest in the group, membership comprises a mix of professional backgrounds. Topics for past meetings have included Word Processors, Public Domain Software, Graphics, and a Halley's Comet package (by the British Museum). The June 10th meeting included talks on languages and ResEdit. During term time the group meets at the London University Institute of Education, August and September will be at the London School of Economics, St Clements Building, Houghton Street, Room S50 on the 5th floor. October onwards will see them back at their present venue. If you are interested in the group please contact MAureen before going along (to make sure that you turn up at the same place as everybody else). At time of writing the next meeting will cover Desktop publishing including a demonstration by somebody called Jim Panks. The September meeting will be on Communications and the speaker will be Paul Beaumont.

LONDON APPLE II GROUP Still homeless and searching for a venue. Abe Savant will be happy to provide you with the latest details.

LEICESTER GROUP (L.A.U.G.H.S) Bob Bown tells me that the pub which has0been their normal venue is being rebuilt and is not available to them at present. Apparently nobody thought to notify the group properly which caused problems when they last attempted to meet. The group normally meets on the first Wednesday in each month and has about 20 members.

ESSEX Pat Bermingham informs me that the Essex group has acquired 3 to 4 new members during the last couple of months. There are approximately 15 members whose interests mostly lie with the Apple II series. Guest speakers and demonstrators are obtained from dealers in the area. Pat is sending me more details about the group which will always have a welcome for new members.

HERTS & BEDS GROUP The June 3rd meeting attracted Apple II and Macintosh users to a demonstration of the Macintosh Development System for assembly language programmers (by Norah Arnold). The failure of the Visible Computer to become visible ensured a lighthearted continuation of the evening. The August meeting will be a games evening and anyone attending should try to take along their best computer game, and a machine if possible. I remember that the invisible man used to use cold cream to become visible sometimes, is that of any use to you Norah ?

That will have to do for now as I can sense Jim's pencil heading for my head again. Anybody who hasn't been contacted this time will be before the next column, or better still, why not let me have a few written details. If you want to actually write a piece about your group just use the average size of each of these paragraphs as a guide. Hope it's been interesting, please talk/communicate with me so that I can help you talk to each other. nb several contacts have said that they would like to see more program listings and tips in the mag, so if you've got ANYTHING what about letting us see it ? Happy Chatting - Tom Wright.

C.I. CAYMAN

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MacChat
Edited by Norah Arnold

Non HFS 800K

If you wish to initialize a non-HFS 800K floppy you can do so by starting up your machine having an internal 800K drive and new ROM's with the old Finder 4.1 and System 2.0 Then choose "erase disk". You will not be given the choice of double or single sided, but you will get an 800k non-HFS floppy which appears to work perfectly.

On the other hand, a 400K disk can be initialized with HFS by holding down the Option key as you either erase or initialize the disk. Obviously in this case the start-up system must use HFS.

Inside Macintosh

After my comments in the last issue about the hardcover version of Inside Macintosh, I received the following letter.

Norah Arnold,
MacChat, Hardcore.
With regard to page 37 of the June 1986 Hardcore magazine: we are official UK suppliers of the Addison Wesley 'Apple' books, so I am writing to bring you up-to-date on Inside Macintosh.
Yes, there was a problem with the hardcover version: but all copies were returned to the USA for replacement. We have been supplying the (error-free) reprinted edition for two months without complaints.
Yours sincerely,
Paul G Smith
Bacchus & Smith Limited.

Thanks Paul, now those of us who can afford the hardcover version can buy it knowing that everything has been put right.

COBOL on the Mac

Micro Focus have announced Mac COBOL(TM) and the suggested retail price in the USA is $495. Mac COBOL comes with two thick volumes of documentation, a User Guide and language reference, and is the first high performance integrated COBOL Compiler on the Apple Macintosh (TM). Mac COBOL is a fully integrated high level certified ANSI 74 compiler for the COBOL programmer and takes full advantage of the features of the Macintosh and allows the user to switch programming tools with a single click of the mouse and get instant response time.

The Mac COBOL Programming Tools consist of:
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RUN, allows execution of applications which have been generated.
BUILD, creates distributable, executable modules which combine application programs with Micro Focus Modules Macintosh ROM routines can be utilized directly from COBOL

The Micro Focus Application Support Modules are a group of sub-programs which have been developed by Micro Focus to enable Mac COBOL applications to give high performance when executing on the Macintosh.

For more information contact Micro Focus Limited, 26 West Street Newbury, Berkshire RG13 1JT (635)32646.

Anecdote

The latest anecdote says that Seymour Cray is using a Mac to develop his new Cray while Apple is using a Cray to develop their new Mac.

Upgrades

I received the following letter on the subject of the MacPlus.
Dear Norah,
I have some initial problems on working with my new MacPlus, and I expect you do too. It seems to me that it would be useful for us to make another collection of such problems for the next issue of the magazine as you did for the latest issue, and also to publish the solutions if we find them.
The programmer's switch if set in the usual position prevents the Mac from working at all. However I continue to find it as useful as ever, so I have to balance it in its usual position and push harder than before to make contact. On the keyboard it is

now impossible to print the grave accent ` above a vowel. It is also impossible to print the tilde ~ above the vowels and letter n/N. I do not know whether this is the result of the fact that I still have an old English keyboard. If so Apple should warn both customers and dealers. I suppose I shall have to get the new keyboard.
The old Apple Font Editor version 2.0 seems not to work; also Fontastic version 2.0 appears at first to work, but when you start modifying fonts it starts eating up part of the font in apparently random fashion with catastrophic consequences. However Altsys has just sent me a leaflet on their latest update so I have immediately sent off my $8 for it and shall report back.
Microsoft Word 1.0 crashed twice for no apparent reason; on the basis of previous experience I assumed that I had managed to corrupt the System. Replacing the System from the original System Disk seemed to eliminate further problems for a while, but then I got a further series of unexpected crashes. It is still not clear to me whether I have corrupted something or whether there is a bug.
Microsoft Basic 2.0. I don't know if it was a bug already on the old 512K Mac, but now with the MacPlus I find that if you try to save a program by Command-S (instead of selecting Save from the File menu) the whole program hangs up and you have to restart with the programmer's switch.
There also seemed to be some problem with the decimal version 2.0; I found it rejecting the first line of every program as bad syntax.
Slide Show Magician: the original Slide Show program refuses to work. Every time I try, using the original master disk (from which I removed the System), I am accused of trying to make a pirate copy!
On preliminary tests RamStart version 1.21 crashes when it starts to copy the System (Bomb ID = 03), Dr. Who v. Daleks does not work. Frogger does not work.
The following I have used satisfactorily so far:
Filevision 1.0, Laserbase, Alice, Othello
Chris Walker London 1 July 1986.

Well, I can help with the RamStart program. You can find a list of the patches in this issue. Using Fedit's Hex Modify and Write Sector commands the job takes no time at all.
Some people find that applications with associated 'help' files or similar, crash under HFS because the applications cannot find the file they need. An application will probably be able to find it's associated files in one of three places.
1. In the same folder with the application
2. In the System (or "blessed") folder
3. In the root directory
All of these places will not necessarily work for all applications, (ie. one application will be able to find its help file only if it is in the same folder, while another will only find its help file if it is in the root), but one of the three locations probably will probably be the correct one.
I think that your programmer's switch should work perfectly if your Mac has been upgraded correctly. I had heard that there had been occasional problems with the switch when the first upgrades were done in the USA, so I made sure that both parts of the switch were functioning before my machine left the premises of the dealer who did the upgrade. It worked OK then and has not caused any trouble since.

Softstrip

Much interest has been aroused by the Cauzin softstrip reader and strip producer. While many purchasers who had been looking for a way to cheaply distribute code have been pleased with the performance of the the strip producing software, they have not been so happy with the licensing materials that come with the product. These state that Cauzin has to be paid royalities on anything anyone distributes that was printed by their program.

However, quite recently Cauzin have started advertising a program that will permit anyone who owns it to generate low-density Softstrips on an Imagewriter I or II. As you might expect, the strip-printing application is distributed in Softstrip format.

ResEdit Pig Mode

According to Steve Costa of BMUG, Pig Mode is a heap fragmenter designed to reveal errors in ResEdit. This makes the program run a bit slow since code is being moved around in the heap a great deal.

Mac+ Monitor

A common query is, "How do I get back to the Finder after pressing the interrupt switch?" It seems that there are several ways of doing this, so try keying in one of the following and you might be lucky:-

G 40F6D8 (CR)
or:- SM F000 A9F4 (CR) G F000 (CR)
or:- PC D000 (CR) SM PC A9F4 (CR) G (CR)

Apple News

Apple Computer Inc. is reported to have greatly cut the number of outlets that sell its personal computers, the reason being that it only expects a moderate sales growth for the next several years. The theory appears to be that it can sell more computers by limiting them to strong dealers capable of sophisticated marketing. The distribution cutback would help these dealers by eliminating competition from weaker outlets whose deep discounts have been driving Apple's prices down. Apple officials disclosed that the company cancelled its contracts with about 600 of the 2,600 U.S. outlets currently authorized to sell its products, saying that the remaining 2,000 stores represented about 90% of its U.S. retail sales. This fits in with the recent creation of 'Apple Centres' in the UK.

NETWORK NEWS

Contributed by Sak Wathanasin and Dr. Ralph Martin

Sexy?

From: KURAS%BCVAX3.BITNET@WISCVM.WISC.EDU
Subject: New name for SCSI port
I read somewhere (I don't remember where) that many owners of Mac Plusses aren't referring to their SCSI ports at "scuzzy ports" as owners of that other PC's do. The Mac owners' machines have "sexy ports" instead. How about a re-education campaign to get all Mac owners to change the nomenclature of their hard

AppleTalk

From: BKV (8278)
Subject: Appletalk Question
I'll be moving to the Western part of the country in about a week and will be opening my own business. I would like to use 2 or 3 Macs in this venture via AppleTalk but am unsure as to how to go about it. The business is video and audio and I've found a programmer who wrote a terrific template that uses Omnis 3. I'm using a Plus and would like to have other Mac(s) hooked into the system via AppleTalk connectors. Do they all have to be Pluses or can one be a Plus and the other(s) 512K Macs; does Omnis 3 have to be present in all of the Macs or can it just be in the Plus and the others act as terminals; will I need fileserver software, such as MacServe or will multi-user Omnis 3 be enough? All Macs will be accessing an Apple HD 20 for starters. Will I need any additional hardware? Hope these questions aren't too dumb, but I just need some clarification on a multi-user Mac set-up. Thanks Brad

From: MACINTOUCH (8282)
Subject: RE: Appletalk Question
Brad, 1) You can use Mac 512's and Mac Plusses together on AppleTalk, but you must run the same System/LaserWriter software on all Macs. 2) Omnis must be present on each Mac. The way it works is that you buy a multiuser version of Omnis that is a kit allowing you to use it on up to 5 Macs (bigger kits are available). It's cheaper than buying 5 copies of the single-user Omnis (which wouldn't work, anyway). 3) Omnis will work on OmniNet (high speed, recommended), MacServe (not quite out yet, but also well thought-of at Omnis/Blyth), and HyperNet (not out yet). It worked on OmniTalk, but that was a bad system that has been dropped. The 3Com solution turns out to be as slow as other AppleTalk solutions -- as I understand it, 3Com uses the fast ethernet only for external communications, not for communicating between Macs. See the review of the 3Server in "InfoWorld" a month or three back. 4) For extensive multi-user appliations, OmniNet seems to be the only way to go. For low-load applications, MacServe or HyperNet should be ok. MacServe gives you the advantage of being able to choose any hard disk, so you can choose one with fast access times (such as the Bernoulli box or AST 4000) for better network performance.
Ric Ford

My Mac Broke!!!

From: woody@Juliet.Caltech.Edu (William E. Woody)
Subject: The value of a thing...
You really never know the value of something until it's gone...
About three million four hundred seventy thousand years ago (subjective time; objective time is about four days), my Mac broke. MY MAC BROKE!!!
When this happened, I realized that there were only two classes out of my five class load here at the California Institute for Technologists which didn't heavily depend upon my having the Mac. But of the other three...
I now wonder about aimlessly, looking for something to do. Class work and games are just not the same without the poor Mac. Even writing mail to this mailing list is just not the same without the Mac; it misses a certain umph! creating a letter to send.
I even consoled myself by going down to the local store and buying more floppy disks, as if the poor Mac was well, and not sick with a life threatening desease. How I miss her! I even thought of sending flowers but I didn't

MacNifty

From: barry@jtids UUCP
Subject: MacNifty Sound Digitizer Review
This past weekend I bought the MacNifty Audio Digitizer with the software called SoundCap for the MacIntosh. Absolutly a fantasic purchase for only a list of $130. Here are the features and my review.

The application needs 512K or greater. SoundCap comes with an A/D converter which they call the BOX which can be hooked to either the modem or printer port. The input to the BOX is a standard RCA connector. The sampling rate is fixed at 22KHz but the software does filtering to allow 1/2,1/3,1/4 the rate to allow samples up to ~60 secs on a 512K. Output rate is continuously variable. An oscilloscope is included to allow you to see the input waveform in real time. This can be used to set the input level as to not allow clipping. The echo box command acts like a Digital Delay Line unit. The delay time can be entered in milliseconds from, as they claim, 0.0001 seconds to 15 seconds! The echo level and regen level amounts can take values from 0 to 2.0. Using the Mac's external sound port, you can put this in your amplification system as a great effect.

The feature that impressed me the most was the spectrum command which is a real time updating bar chart that displays amplitudes for many sample frequency ranges (ie. spectrum analyzer). This is accomplished using FFT (fast fourier transform) and as the resolutions increase the time between updates increases, but is fast none the less (what do you want for $130?).

Once a waveform is sampled into memory, much digital signal processing can be used. The following is a summary of their 'Sound Effects'.
1. Silence - allows you to zero any selected part of the waveform.
2. Backwards - allows you to reverse the selected wave.
3. Amplify - increases volume (amplitude) by any amount.
4. Reverb - Digital delay like the echo effect (as mentioned above).
5. Ramp Up - Fade into sound.
6. Ramp Down - Fade out of sound.
7. Scratch Bar - pitch shift of sound.

8. Flange - add flanging effect to sound (programmable)
9. Noise - makes psuedo white noise.
10. Mix - Mixes sounds for overdub effect.
11. LowPass - high frequencies above the Nyquist limit for the selected sample ratio are eliminated.
12. DownSample - reduce the amt of space that a sound takes up in memory.

To make the work easier, you can zoom in and out of the waveform display. You can also cut and paste (in normal Mac fashion) sections of the waveform. Because of the memory limitations, the Undo command is unimplemented in all of the functions so save good copies. These samples are very large so the biggest problem is disk limitations. To save to disk, there is an option to compress the data files.

They have included a few "Goodies" all in the public domain!
1. SOUNDINIT - makes your sounds play on boot up.
2. BEEPINIT - replaces the system beep with any small digitized sound.
3. Type Writer - Install digitized old fashioned type writer key sounds so that when you type, you here key clicks, space key and return (shhhhhhhhhhhk bell).
4. Sound Play - allows you to play digitized sounds without needing SoundCap program.
5. Sound->Video - put digitized sounds into VideoWorks.

I would have likod to have had the capability of drawing in sections of the wave to change or add to the existing wave. I don't really see the difficulty of adding this options since programs like the public domain program Sound Lab and Concertware etc. have this ability.

Summary-allows digitization of external audio signal at 22KHz - ability to play back sounds on Mac or external sound port - oscilloscope implemented to see real time audio signals - digital delay with delays of 0.0001 to 15 sec - use as effect box - real time audio spectrum analyzer.

I have probably missed a lot of clever uses for the program, but as they say in the docs----experiment!

(Disclaimer- I have no connection to MacNifty or Fractal Software except as a satisfied customer. My opinions are solely mine etc.....)

Barry "fingers" Kirsch

MacWait

From: chuq%plaid@SUN.COM (Chuq Von Rospach)
Subject: macwait crashes system

I've been able to verify this on my system, and it has been mentioned on CompuServe as well, so I thought I would warn everyone that the MacWait program (which installs an INIT resource that causes the hands to move on the wristwatch cursor) can cause your system to crash sporadically. On my machine (512, Old ROM) the symptom is a sudden vertical bar across the screen, followed by a complete freeze of the system (reset time).

I haven't seen a specific reason for it, but it ONLY happens when that INIT resource is installed, and it is timing dependent. It only happens when the wristwatch is on the screen, and based on watching the crashes I had tonight closely, seems to be because the cursor gets updated while the application is also doing something to the cursor (moving it, for example). I pulled the INIT out after two crashes tonight, and it hasn't bothered me since.

My guess is that something is causing a memory compaction with a dereferenced pointer, making everything go whammo. It seems to happen a lot more often if you run a ramdisk or have a smaller amount of memory, so beware. My advice: Macwait is cute, but not worth losing data over.

chuq

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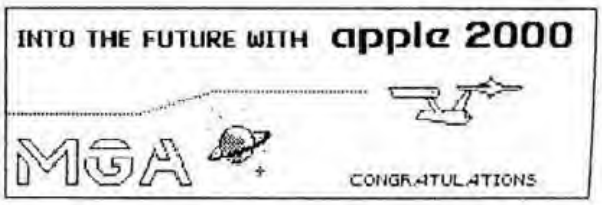


A new **Omnis Bulletin Board** has been started in the U.S.A run by Sysop Jim Garvey. Has a special technical assistance section and all normal features.
Call (612) 894-2609, 24 hours. Select Command <P>review for access. Read the READ ME File first.

DEVELOPER'S FORUM

The File Protect Bit

How can I set the Protect bit using ResEdit? I can set most of the file bits in the Get Info box, and the File Protect bit is displayed there, but when I click in the check box it doesn't toggle. Is there some special option-key combo I have to press? Some magic certified developer's password that I must chant in order for Apple to let me mess with things I shouldn't touch? SetFile, etc., doesn't work properly under HFS, and that's why I need to use ResEdit.
JimWeinrich

HFS directories don't support the same file info bits. I'm pretty sure the file protect bit is gone, making it impossible to use old techniques for defeating copy protection hassles on programs such as MS Word. The zap programs such as HDUtil and MacZap handle it though.
Ric Ford

No disk editor I have seen gives access to them w/o dire straits, but set the byte two before TYPECREA and the byte immediately after to $C1. That protects, locks and renders invisible the file. Set the first of those to $C9 for bozo, if necessary. Fedit 3.52 doesn't allow looking at the volume directory, but you can find the file with an ascii search for the name or type/creator string. If you're doing this on the Plus with floppies eject the volume BEFORE quitting to the Finder. Otherwise, for some unexplained reason, the changes are not recorded.
Oppenheim

Beware of PMSP

I just discovered a feature of HFS that every programmer MUST watch out for. If you get back "no error" from a FS call, the file that you accessed will either be in the folder you thought it was or in the blessed folder (where the System and Finder are). Most of the time this is ok but if you assume that success means the file is where you thought it was--watch out.
I have a program that copies files and was amazed when I was copying out of the System folder, the "from" copy disappeared after the copy. To get rid of the destination file before copying, I was deleting it and ignoring any "file not found" errors. I hit the floor when the delete succeeded even though there wasn't any destination file!!! This behavior is caused by the Poor Man's Search Path or PMSP. Here's a description of how PMSP works from Mac Tech support:
The PMSP is used for any call that can return a file not found error, such as PBOpen, PBClose, PBDelete, PBGetCatInfo, etc. It is not used for indexed calls (that is, where ioFDirIndex is positive) or when a file is created (PBCreate) or when a file is being moved between directories (CatMove). Here's a brief description of how the PMSP works.
1) The specified directory is searched (specified by dirID or WDRefNum or pathname); if no file is found,
2) the volume/directory specified by boot drive (low-memory global at $210 is searched IF it is on the same volume as the specified directory (see #1 above); if no file is found, or the volume/directory is not on the same drive,
3) the 'blessed folder' is searched IF it is on the same volume as the specified directory (see #1 above); if no file is found
4) fnfErr is returned. Technotes will be forthcoming about PMSP. As you can see, you have to be really careful when doing things like copying. I looked at the source for Util in net.sources.mac and, if you try to copy out of your blessed folder, you will destroy the file you're copying when Util opens the "new" file and truncates it (assuming that there is no "new" file).
G Marsh

INIT Mechanism on the Mac Plus

For those with a MacPlus you can avoid having to install INITS into the system file. Technical Note #57 says on page 18 that: "When the system starts up, it looks for files with types INIT and RDEV in the system folder. If it finds any, it looks in those files for resources of type INIT. If it finds any of those, it executes them."
I found this handy since I don't really like installing INITs in my system file (hate mucking with it and having to fix up everything after a new version of the system shows up). In this case I merely used the resource editor to create a new file with just the INIT resource of interest in it. I then used the GET INFO part of RESEDIT (v1.0d7) to set the type and creator. Once you are done, put the resulting file into the system folder and the INIT will be run upon startup. If you want to stop that INIT from being installed, merely remove the file from the system folder and hide it in another folder. I think this is preferable to modifying the system file itself.
David Gelphman

A Quickdraw Bug?

I have found what seems to be a QuickDraw bug. If you have a funny-shaped window, like an apple, and you drag the window upwards, then it redraws the window very quickly. If, however, you drag the window downwards, it redraws the window very slowly; the delay is unacceptable.

Apparently, a region is stored as a linked-list of horizontal scan lines. When you move a window on the screen, the Window Manager calls CopyBits to copy the window contents. Normally CopyBits runs from top to bottom, using the scanlines of the region in order. However, if you are copying from a grafport, like the screen, to itself, then CopyBits may have to copy the image from bottom to top so that it won't lose information during the transfer.
This is potentially a problem for regions. CopyBits must traverse the linked list of scan lines in reverse to handle this special case. And here is where the ROM goes bad. Instead of making an array of links and accessing it in reverse order, or instead of putting all the links on the stack and popping them in reverse order, CopyBits simply goes through the linked list again and again for each scan line. Its algorithm takes quadratic time instead of linear, and QuickDraw turns to SlowDraw.
But, you might object, what about the extra space that the array would take up? Well, if you are really concerned about space, you can check to see if there is enough distance between the stack and the heap to store the array, and if there isn't, you can use the brain-damaged algorithm. But this issue will come up very rarely; the extra array is necessarily smaller than the region that CopyBits is dealing with, so there is usually enough room.
Not that being low on space should stop QuickDraw. My friend and I found a totally different QD bug which wastes *both* time and space. When you fill a polygon on the screen, it converts the polygon to a temporary region and then fills the region. It will convert the *entire* polygon to a region, even if most of it is off the screen. So if only ten percent of your polygon is actually on the screen (or equivalently, in the GrafPort), Quickdraw uses ten times more space and time than it needs. If you don't have enough space, that's just too bad; you usually get a system crash. Some of our polygons were plenty big enough to cause a crash; I ended up writing my own clipping routines (Ugh!).
I am currently working on a magnifying glass desk accessory, with a magnifying-glass-shaped window, and I find this bug extremely annoying. Any comments from Apple?
Greg (greg@harvard.UUCP)

RmveResource Problems

The problem with indexing calls to RmveResource is that the index values are updated after each call to RmveResource! After you remove the resource with index 0, the resource with index 1 becomes resource 0. Your next call then deletes what was previously resource 2, ad infinitum. This is obvious once you realize what is going on, but it took me days to figure it out. The correct way to remove all resources of a given type is:

```
SetResLoad(FALSE);
for (i = CountResources(theType); i > 0; i--) {
  resHandle = GetIndResource(theType, i);
  if (HomeResFile(resHandle) == resRefNum) {
    RmveResource(resHandle);
  }
}
SetResLoad(TRUE);
UpdateResFile(resRefNum);
```

This way, the index values remian the same despite the calls to RmveResource.
Andrew Shebanow
(shebanow@ernie.BERKELEY.EDU)

***Contributions for this column should be sent to: Developer's Forum, c/o N. Arnold, P. O. Box 177, St. Albans, Herts, AL2 2GE, or on the Force to BSG009*

Software Supplements

Information from American developers suggests that Apple are renaming the Software Supplements to avoid confusion. Instead of naming them "Month Year Software Supplement", the new terminology will be "Volume N Issue M".

The following table shows the corresponding names:

May 1985	Volume I Issue 1
December 1985 (two shipments)	Volume I Issue 2
March 1986 (not released yet)	Volume I Issue 3

Developers have also been issued the following warnings about the files that were part of Volume I Issue 2 in the USA (don't forget Apple UK are about a year behind):
System 3.1.1 was issued with an Installer set up for 3.1, so the Installer doesn't work (this has been widely known for some time).
Font/DA Mover 3.1 is not compatible with the combination of 128K ROM and a System of release level less than 3.1; it can cause damage to the System file if used in that configuration, so be sure to use 3.1 or higher System release.

Two Views On MacAUTHOR

MacAuthor
A Product and Company Review
by Alan Day

As a mathematician, I am extremely interested in a good WYSIWYG word processor that can handle subscripts, sub-subscripts, formulae, etc. with some ease. Roughly a year ago I heard about MacAuthor by Icon Technology Ltd. and thought that it might do the job. I sent for information, both by mail and by a personal friend who was in England that summer, and true to their letter of 21 Aug 85, I received a 1.03 b-test version along with a packet of documentation in September, after remitting $316.00Can for the privilege.

Great!! My unbounded joy ended upon attempting to use this product. The standard Cut/Copy/Paste was not implemented. The program could not open or save work as TEXT files. In fact the list of "not yet implemented" features included Edit Album, Insert Title, Insert Date, Insert Page #, Open Album, Make a frame, and Align to Grid. The"Dear b-tester" letter ended with the following: Warning Don't forget that this is still a pre-release version and although we have made some effort to remove bugs there will still be problems that we would like to hear from you about. Don't yet rely on MacAuthor for serious work.

Now the reader of this might ask what was I to do with this b-test? I certainly asked myself that question. My answer was to use it for correspondence since I definitely did not want a 25 page research paper to vanish into thin air. I then diligently prepared a non-graphic letterhead Stationary Pad with the letterhead extending 7 1/2 inches across the page (with 1/2" margins). I had to write Icon anyway to tell them that their Read Me file had not printed properly. I had never seen a System Bomb ID = -1028 before and had no idea how I had caused it at first. With a bit of experimenting, I found out that it was caused by horizontal scrolling out of the view window. My paragraphs, you see, had 1" margins so when the text had to scroll off the page, MacAuthor lit the fuse.

Oh well, a minor inconvenience, I'll just try to forget about word wrap and save very often. Then if I forget to manually scroll the page, I'll only lose a sentence or two. Hah! The Bomb forces you to quit the program and your previously saved file becomes completely unopenable (unless you want to see more bombs whose numbers at this time escape me).Since I am a computer neophyte and had never done b-testing before I was rather unhappy with what my money had bought. I studiously watched the word wrap and eventually produced a letter to Icon that ended with: "I trust that my contribution to your working capital will help keep you afloat until the full product is available. The possibilities of more investment from my University and the users' group here have faded until a workable b-test or final product becomes available."

I did mention in this letter of 30 Sep 85, that their product had some potential - the 7 levels of sub- and superscripts as well as the overstrike capability worked fine. The ability to set up your own Style options with command key equivalents also seemed nice until I asked for Symbol, Bold, and Underline together. I had set up a command key for each of the above and wanted them all together. It seems that these were not toggles though since I could get only one of these at a time. To get all three, I would have to set up a new menu bar entry. Thus for the 8 toggles in the MacWrite Style menu, I would need 2power8 = 256(!) entries in my menu bar in order to capture all possibilities. Scrollable menus do not exist on a 512 Mac.Actually the above was the suggestion (2power 3 entries) from Icon when they replied on 7 Oct 85.

I quote two paragraphs: "Our approach to b-testing has been a little unusual in that we have been more concerned with the users reaction to the concepts of MacAuthor - which caused us to introduce multi-level superscripts, word count and a redesigned style editor. As a result we have concentrated on the features side and left bug removal until all these were in place. Thanks again for your letter. Please feel free to ask for the return of your $316.00Can, although you may like to defer judgement until you see Version 1.04."

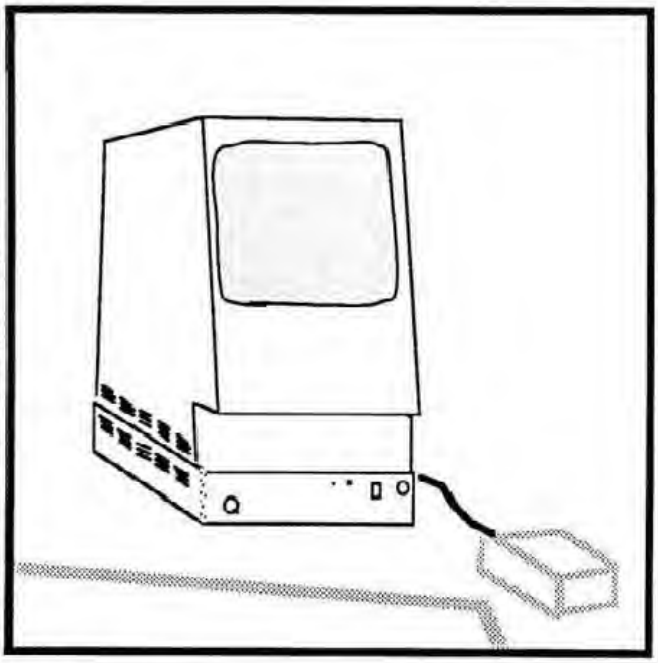
I deferred, and received in due course Version 1.04. The great change was that now one could paste TEXT files into a MacAuthor document. Okay, I can still play with it, bring in an old research paper as TEXT, and reformat it with all the standard mathematical paraphenalia. After pasting, I started searching for my old subscripted i's and j's to change them back. As the search started to scroll vertically off the page I received my first System Bomb ID = 39 (or was the first one 49?). Again I was forced to quit and again my document went into limbo. But you ask what about all the other features added to 1.04 that were not in 1.03? The answer is 0.00!

MacSerious THE MAC Software House
wishes Apple2000 a bright future.

Qisk!

The new name in hard disks for Mac Plus.

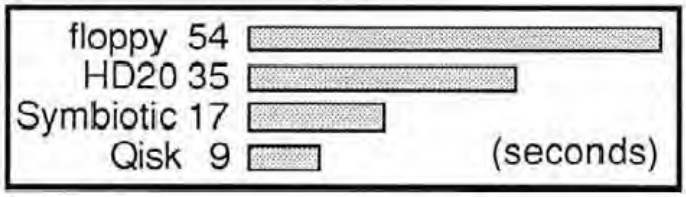
When we didn't see a hard disk we wanted to buy for our Macintoshes, we used our disk system knowledge to build our own. When we still didn't see one as good, we went into production. Now you can benefit from our experience with a Qisk 21 megabyte disk.



Sorry! Qisk's new slim case couldn't be photographed in time for Hardcore! Write for a brochure.

Fast

Qisk transfers data to Macintosh Plus up to fourteen times faster than other hard disks. Of course Qisk can't speed up the processor of your Macintosh, but take a look at these typical times to duplicate a 380K file with the Finder:



Slim

Qisk's case is just 6cm high, with colour and styling to match Macintosh. Put it underneath, or anywhere up to 21 feet away. And slim means it's easy to move around. Leave it somewhere safe when you travel with your Mac, or take it on its own from Mac to Mac. And you'll be glad you can physically prevent access to your data with the Data Protection keyswitch*.

*A legal requirement for some users.

Plug & Play with SCSI

SCSI is an important new standard for microcomputers. You'll be able to connect more disks, tape streamers, new products like CD-ROM or low cost laser printers, all through SCSI. But you'll want products like Qisk which use the standard Apple SCSI cable system, and products like Qisk that let you see and set the SCSI unit number from the front panel, especially if you plan to use them with different machines.

Pre launch offer

At £1295 plus VAT, we think Qisk-21 is the best value for money hard disk for your Mac Plus. But place an order quoting your BASUG membership number before the September launch, and you'll get a substantial discount. And if you don't think Qisk is every bit as good as we claim, you'll have fourteen days to return the disk for a full refund.

British

Whether you want technical support and advice, or speedy manufacturer's repairs, you are best off with a product designed and built in Britain.

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booklet "Mac, SCSI & hard disks" ☐

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Computer Capability Ltd, 38 Northcott, Bracknell, Berks RG12 4WR telephone 0344-482435

. . . *from* Computer Capability

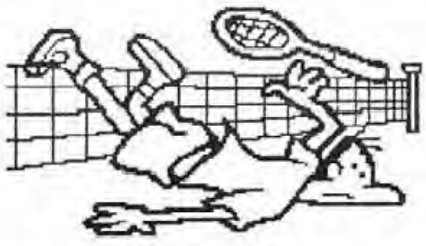
At the new year, an article appeared in MACazine extolling the virtues of this great new word processing program. It lauded the frames for graphics, the 698 page documents, and other wondrous things that I had not seen. Since the great Version 1.04 that I had received contained none of these goodies, and since Icon had had my money since September 1985, I was not amused. On 23 Jan 86, I wrote a letter to Icon suggesting that they should provide me with a working copy of MacAuthor, a copy that obviously this reviewer possessed. Furthermore, I suggested that, if I did not receive same soon, I would do my damnest to expose their misrepresentation of the product.

Now that indeed produced a response! I quote from their letter of 9 Feb 86: "The version of MacAuthor used by Jim Mangles for his article was the same version that you have received although he did look at the test software that was written for the Album. We too thought the article was a bit over the top - I have written to all those who have enquired about MacAuthor as a result of it with a copy of a paper written by Keith and myself which sets out just what the product can do. I was surprised to learn that you had paid us over five months ago and have written to our bank for a Canadian dollar cheque to refund you, as clearly you are not happy with the deal you got. We will however continue to support you, as we value your comments."

Re my money: I was also surprised since he mentioned the $316.00Can in his 7 Oct 85 letter. I have as of 6 May 86 not received any cheque. Re MacAuthor: The aforementioned enclosed paper (produced with Version 1.05 by the diagram on page 6) states that the program will become available "During the second half of February (1986!)". If "support" is supposed to mean "get", I have not yet received it either.

I am sending this diatribe to all Macintosh magazines, all BBS's and all MUG's that I know about. If my attitude towards this company is naive and stupid, please let me know. If you can provide information on MacAuthor that is complimentary, please let me know. I am willing to collate all replies and post these to anywhere I am able.

Alan Day 120 Academy Dr. Thunder Bay Ontario Canada P7B 5E1
uucp: watmath!thunder!raday CIS: 76505,13



MacAuthor

A review by Peter Korn

MacAuthor, from Icon Technology Limited, is, as they claim, "More than a word processor". MacAuthor is a combination word processor, page layout program, math text processor, book-processor.

First the features of the program:

1) Automatic word count (shown at the bottom left of the current window). The word count is recalculated after every decent-length pause in keyboard entry.

2) Page layout much like the first version of Ready-Set-Go (I haven't used any of the later versions, so I'm not qualified to compare). You make a text or graphic "frame" which is a unit all to itself, which can be moved about on the page. This allows columns, text and graphics on the same line, etc.

3) Multiple super- and sub- scripting; also to the point of sub- and super-scripts having super- and sub-scripts respectively.

4) Strike out text (text with a line through it) to show revision information.

5) Multiple headers and footers. Also right/left page specific.

6) An about window that gives you almost a page of info about the current document (the active document window); including things like total time wasted on this document; number of times edited; #pages, words, lines, and characters; # words typed this and last session; start date/time of this and last session; and the time spent this and last session.

7) The program is a TRUE WYSIWYG editor; more so then MacWrite! If you specify left and right margins (especially the left one), you will see white space on the left. If you specify a 1/2 inch top margin, that's what you'll see on the top of every page. You'll also see the headers and footers (of course).

8) You can to kerning.

9) Multiple documents can be open at once (up to four).

10) You can create your own specialized characters by using an option-backspace combination (type-over, basically).

11) Multiple document styles available (comes with 5: memo, letter, article, script, blank). I haven't figure out (yet) how to add my own.

12) Paragraph "scripts", where you define a "type" of paragraph (such as a quote), which you can then invoke whenever you want. Each type of paragraph that you define goes into the Paragraph menu, from which you can invoke them. You can also assign command-key combinations to these paragraph scripts from within the program (though there are a limited number of command-key combos available).

Two Views On
MacAuthor
(continued)

This paragraph setup defines the left and right margins, the tab settings (of which there are many sorts), justification, and the font.

Which brings me to the next section, the not so nice "features":

1) You cannot change font from within a paragraph.

2) You cannot do footnotes a la MS-Word (must do them by hand).

3) All paragraphs below the one you are currently editing disappear from the screen, and only re-appear during the above-mentioned pause, during which the words are recounted. This one is a biggie! If I am just quickly adding something to the middle of a document, I don't want to HAVE to wait 3-8 seconds after I finish typing in that one sentence before I can go back to a portion of the document farther on. Turning off "automatic repagination" doesn't seem to change this.

4) I get the impression that one can do with headings what MacAuthor allows you to do with Paragraphs; ie.: set up "heading scripts". I don't know for sure because I refuse to look it up in the manual (you should *never* need a manual with a non-database Macintosh program), and I can't figure out how to invoke it (if it does indeed exist).

5) The Mac-like interface isn't as Mac-like as it could be. For instance, I should have an I-beam whenever I'm over the text of the document; there is no "about MacAuthor" option under the Apple menu, only an "about <current document name here>" entry (nice idea, but have both, and not just the latter); placing the margins and tabs on the ruler isn't done by dragging, but rather by clicking on the desired thing (left margin, right margin, tab), and then clicking next the ruler where you want said item to be--after this though, you can drag the icon around along the ruler to change the position, or drag it off to remove it); many of the "dialog" boxes are actually windows without scroll bars (c'mon folks, for dialog use a dialog box); etc. etc.

6) Because of all the many things that it's doing (keeping track of the page length, number of words, etc. etc.), editing is just a tad slow. Being a fairly fast typist, I will make a correction, and type away, only to find that MacAuthor must first re-draw the (heretofore hidden) paragraph(s) below the one I'm working on before it will acknowledge that I've typed in other information. This also happens when I've finished a paragraph in the middle of my document, and go to scroll. Nope, MacAuthor must first re-draw the paragraph(s) below the one I just completed.

And, of course, the bugs:
I found the program to be pretty bullet-proof--it didn't ever crash on me. However, there are a number of things that need to be changed to the extent that I feel they should be called bugs (undocumented features...).

1) MacAuthor doesn't believe that the system disk can be write-protected. It gave me the wierdest errors...

2) MacAuthor blithely assumes that you'll always want to print; and therefore doesn't allow itself to be run unless the system disk contains a "printing resource".

3) MacAuthor is copy protected. Version 5.2 of CopyII Mac (the latest, as of this review) won't copy it.

Summary:
The program is pretty well thought out and consistent. Furthermore, it's the ONLY word-processor on the market (to my knowledge) that allows super-super-sub--scripts (and variations on that theme), and the only one that allows style sheets.
MacAuthor is the only WYSIWYG word processor out there (MacWrite is pretty darn close though), for those that go for that sort of thing. Personally I find that even a 68K at 7.xx Megahertz just isn't enough for a true WYSIWYG editor--it just takes too much time to do all the stuff that needs to be done.
However, it is in need of a version 1.1 to correct a few fairly minor things. A version 2.0 with a spelling checker, theasaraus, and other such frills (grammer checking, word analysis, etc.) would be most appreciated. I'd also like to see MacAuthor read MacWrite, MS-Word, and ThinkTank files. Finally, they need to re-write the code that updates the paragraphs below the current one (along with an option to NOT have that feature)--as it stands now, it's far too slow for my tastes.
But, if you need style sheets, sub-sub-super-scripts, the ability to create your own characters without having to use a font-editor, and kerning, then this is the program to get.

Note

As MacAuthor is a British product which has aroused highly conflicting opinions, we would like to hear the views of any member who has purchased MacAuthor. Write to the P. O. Box and tell us what you think of MacAuthor. N.A.

Macintosh Plus with KanjiTalk™ (TM)

Apple Computer Japan have introduced the Japanese Macintosh Plus personal computer complete with a state-of-the art Japanese operating system. Two years in development, the KanjiTalk(TM) operating system gives Japanese users access to the three traditional Japanese alphabets plus the English alphabet.

Alexander van Eyck, General Manager, Apple Japan has said that KanjiTalk is unequalled in the Japanese marketplace because of Macintosh's ease-of-use, advanced features and powerful graphics. KanjiTalk offers immediate access to a powerful library of Macintosh software which can be easily translated (localized) from its original language to Japanese. Perhaps more important, KanjiTalk also provides a development environment which allows local software developers to create Japanese software products. Apple Japan has begun to ship fully localized versions of Apple software, including MacPaint, MacDraw and MacProject. EgWord, a powerful Japanese word processing program from ErgoSoft, is available at launch. A localized version of Microsoft Excel, the powerful integrated spreadsheet program, will be available from July.

Historically, the Japanese personal computer market has been driven by word processing applications. Now, according to van Eyck, the emphasis is beginning to shift towards spreadsheets and data bases. Apple Japan think that from a timing point of view, they are announcing the right product at the right time. The market is demanding powerful, diverse software solutions and with KanjiTalk, third-party developers can localize and ship those solutions in a fraction of the normal time, giving them a unique window of opportunity. The suggested retail price for the Macintosh

Mac In Japan

The 128k Macintosh (English) was first introduced in Japan in April, 1984. In May, 1985, Apple Japan introduced a katakana (phonetic) keyboard for the 512k Macintosh. EgWord, a powerful word processing package was introduced in September, 1985, by ErgoSoft. Several other third parties have also introduced various other versions of Japanese Macintosh software.

Apple Japan is offering a variety of upgrade programs for existing Macintosh owners.

Main Features of KanjiTalk

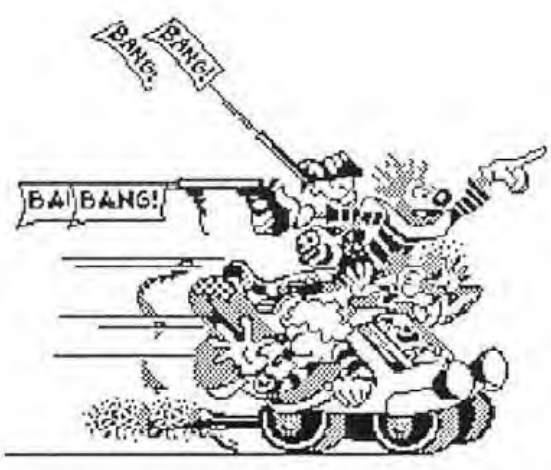
Japanese input/output using existing software Since "KanjiTalk" supports Japanese language input and output at an OS level, selected software developed in the United States and Europe can be easily localized in Japanese. In addition, new software which follows Apple's development guidelines can also be localized for Japan. KanjiTalk application tools also facilitate the conversion of application software from English into Japanese.

The KanjiTalk utilities are built into the Macintosh's Desk Accessories so any function can be used any time without turning off (or rebooting) the software. In addition to the 16 x 16 dot font, KanjiTalk is equipped with a 24 x 24 dot font for producing enhanced quality output. KanjiTalk comes with print drivers for Apple's Imagewriter II.

Japanese software developers can easily access and utilize KanjiTalk development tools to develop unique Japanese software products. Accurate sentence-level conversion Through phonetic input, the Macintosh can execute kanji conversions, making it possible to convert up to 40 characters at once. KanjiTalk features three separate dictionaries with different conversion levels--a basic dictionary, special dictionary and users' dictionary.

5 Volt Supply

A gadget which takes a 5 volt supply from the mouse port in order to power a Thunderscan, Corvus transporter or a Baud Buster, is available from Vistec on 0332-833330.



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We are dedicated to helping the serious - or not too serious - Mac user get hold of the software he or she needs ... and which no-one else supplies this side of the Atlantic. If you can't find it elsewhere, try MacSerious. If we don't have it in stock, we'll get it for you if it exists.

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There are 461 programs listed and described in our Summer Catalogue. Why don't you write or phone for one? (It includes the MacSerious MiniMagazine, and a list of 78 disks full of public-domain & shareware software. These programs are available free, but a £7.50 service charge for duplication, etc., will be charged.)

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is a powerful 2 & 3D object-oriented graphics package. Now version 1.1 adds autodimensioning and lathe-like shape-sculpting tools to it's 22 shape-tool palette, power reshaping, hidden line removal, 360° rotation in 3 dimensions using the unique circular scroll-bar, moveable camera, enhanced pattern editor, full text features, LaserWriter support, and much, much more.

Statview512+ £325.00

The most advanced, most comprehensive statistical package available for the Macintosh today ✓

Now here!

Tempo

Intelligent macros for the Macintosh

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Mac Zap - the one essencial disk utility. No more un-backed-up disks £49.95

Cricket Graph £174.00

You can easily create presentation quality graphs with powerful features like: 16 bar patterns & plot symbols; selection of fonts, sizes & styles; text, lines & arrows added anywhere; up to 2000+ point data sets; regression curve-fit & error bars; 3D pizzaz-adding depth; Graphic Macros; Colour plotting; & much, much more.

Executive Office ✓

The Complete Integrated Management System £295.00

A lightning-fast, ultra-powerful, fully-integrated executive office management program that not only gives you everything you need, but is by far, the easiest business software to understand and use.

File Management, Word Processing, Calculations & Tables, Report Generation, Electronic Worksheet, Graphics Design, & MailleMerge are included.

The choice is no longer just 'Jazz' or 'Excel'. There's now a new blueprint for success.

BUSINESS

FilevisioN

Now it's here - the Mac's most versatile file manager! Up to 32,000 records, files up to 4Mbyte. 4,000 characters per record, 99 information fields & 16 data types with 2,000 characters per field - & graphics, of course, but now you can cut'n paste from MacPaint & MacDraw, & full LaserWriter support is provided. £345.00

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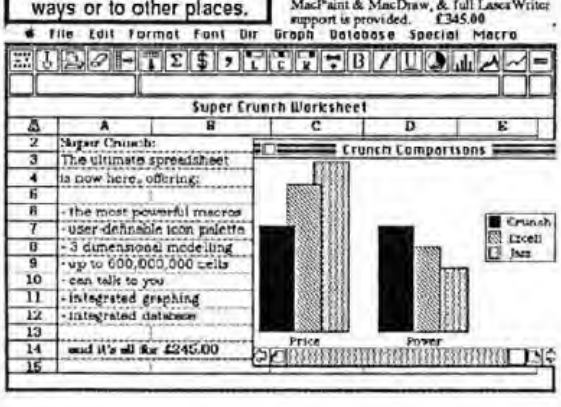
In the UK: £2.00/order (1st class mail)
W. Europe: £3.50/order (normal mail)
Call for costs by other ways or to other places.



Can you manage without a disk catalogger/labeller much longer? Fully Mac+ & hard disk compatible

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Silicon Press £74.95

The colour print solution for the Mac. Silicon Press is a utility for printing labels, cards, or full-page layouts - whatever size you want - in colour in the ImageWriter II. Text & Graphics can be mixed freely, & labelling information can be merged from most database programs. The LaserWriter is fully supported.

MacAuthor

... More than a word processor

MacAuthor - the ultimate document creation system. It doesn't matter if you want to write plays, scientific papers, poems, Ancient Greek, technical manuals ... or write a thank-you letter to your Aunt Ethel, you're going to do it better, easier, quicker with MacAuthor. £199.00

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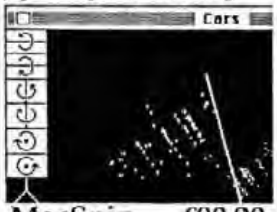
MacGolf is a truly superb 'Golf Simulator'... so realistic you'll think you're really there.

MouseWrite £199.00

is a Hebrew/English word processor with RTL entry. Includes mail merge.

Help! (It's the workers again.) We can't take much more of this. The boss keeps finding more good programs making it harder to write this stuff.



MacSpin £90.00

A revolutionary tool for graphical data analysis: using 3D display via rotation & 4D via animation, MacSpin makes it easy to visualise & discover trends, patterns, associations, & outliers.

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- an electronic design software system with Schematic Entry (£775.00) and Digital MacroScope (£1050.00). This is a top-end professional system, with linker to Bishop Graphics' Quick Circuit program (£650.00), making it the most powerful system of it's kind on any micro.

EZ-Draft £1750.00 ✓

- the first fully professional CAD system for the Mac, EZ-Draft is significantly more powerful than any other CAD systems available on micros, and ideal for all types engineeringing & architectural drawings and technical illustrations. Optional EZ-CAM completes the system. Please call for full details. Special Educational price.

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Fontographer V 2.0

- the only professional laser font editor available for the Mac today. When your design is ready, it can be printed on the LaserWriter, or any PostScript™ compatable device. *Now supports composite characters and can replace or add new characters to the built-in fonts.* Maximise your LaserWriter power. Bitmap are made automatically, and can be fine-tuned with an enclosed copy of FONTastic, the famous bitmap font editor (also available on it's own)

Fontographer: £375.00
FONTastic: £44.95 ✓

The MacSerious Top 10 June 1986

1	Mac Zap
2	Easy 3D
3	FONTastic
4	TML Pascal
5	Mac 3D
6	Silicon Press
7	Accessory Pak 1
8	Fontographer
9	Mac Golf
10	Macinooga Choo-Choo

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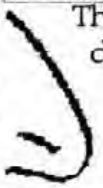
is too cheap. We could be selling it for 2 or 3 times the price. This amazing system will compile BOTH Lisa & Macintosh Pascal, permitting the creation of stand-alone, double-click-able applications, and DA's. Complete access to the Toolbox is provided, including QuickDraw, MacInTalk speech, printing, serial drivers, AppleTalk LAN, and the SANE floating point types are supported. MDS and C routines can be linked. This is a complete development system incorporating multi-window editing, Linker/Librarian, Resource Compiler (RMaker), and executive batch processing as well as the Pascal Compiler with fl application & D.A. examples. Works with Mac XL, 512K Mac, MacPlus, HFS, HD20, and extended memory systems. An optional library of procedures to manage your main event loops - MacExpress - is available at extra cost. *Can you afford NOT to own this program?*

If you see ✓ beside an item, it means we have a demo available. Cost is £5.00 each inc. P+P, refundable on purchase.



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A complete implementation of the C language as defined by Kernighan & Ritchie's *The C Programming Language* (1978) plus more recent features as described in *C: A Reference Manual* (Harbison & Steele 1984) and special features to permit proper support of the Mac environment.

Performance is what counts: Lightspeed C compiles up to 17 times faster than Cosulair C, 14 times faster than Megamax C, and 12 times faster than Aztec C.

Generated code is between 70% & 90% of the size produced by these other compilers, and execution time varies between 65% and 95%. Call for full details.

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Personal BIBLIOGRAPHIC System reviewed by Richard Wilday

This program is, as far as I can tell ,unique, in that it is the only program at the moment of its type for the Mac. It is as its name implies a program to write, store and manipulate data on Bibliographies, or in other words book listings. The program is on a single disk and is really just a very specialised database. The large lose-leaf manual is well laid out and easy to read with many illustrations to show what the screen should look like at that particular stage. Part of the manual consists of two tutorials. The first uses a Sample data file found on the disk to lead you through a typical series of records. The second tutorial goes into greater detail and shows you how to build your own data file and punctuation file, more of this later.

You start a new database by selecting "New Database" from the File menu and name the database in the dialogue box which is displayed. Click on the Save button and the PBS will create the new database. A blank workform will be displayed, ready for data entry. The 'Workform', of which there are twenty different types is the name given to the field layout. The reason for this number is to cater for the information that would be used to describe a Book being different from that used to describe a Journal or Music Score ext. To display a different workform, you select the name of the workform from the Citation menu. After completing the data for a record, click on the Insert button. When you have finished inserting records, click on the Done button. The fields are variable in length. The upper limit of 32,000 characters or about twentyfive 250 word pages of text is the same as the limit of the record itself. The records each of which are numbered in the order in which they are entered can be edited in the standard Macintosh manor (cutting, copying and pasting). When you have finished editing, you click on the Update button to have the changes made permanent.

The Search facility as you would expect in a program like this is particularly strong and can be done in various ways. First you can search alphabetically through the database, or search by record number, each being selected from the Search menu. You can search all the characters in the database or confine a search to just specific fields. Also you can search 'Index fields' which are particular words that you have previously tagged in a field. You can look for specific records or groups of records and have them displayed in their existing workform layout or the other way is to retrieve records and have them reformatted into a new workform and their own bibliography. This search supports wild cards and Boolean logic (and, or, not).

The program basically has two parts, the database which stores all the records for your bibliography and bibliography itself which is stored as a text file. To format this from the database it has its own menu and setup page. You can choose the portion of the file (entire, remainder, current record, or records selected by means of a text search) to be formatted and the fields can be set to standard, bold, italic, and/or underlined. The way in which the final bibliography is displayed is determined by the 'Punctuation File'. This is a special text file, with certain lines that are required and others that are optional. It takes the information in a workform and adds the information needed to make it a proper bibliographic citation. You can create your own file or use one of the three found on the disk, which are the official ones for the American Psychological Association, the Modern Language Association, or Science Magazine. To print a bibliography is done in the usual manner from a printer and page setup menu.

One additional feature of this program of particular interest to those with modems is the facility to exchange records with other programs. You 'Import' or 'Export' items using the File menu allowing you to use a structured text file format for PBS records in order to exchange them with other programs. You can also use this feature to perform merging operations between databases. The 'Export' of any item causes the selected records (as indicated in the Bibliography menu) to be outputted into a specified text file with each field preceded by a tab character and each record terminated by a carriage return character.

The 'Import' of an item expects a specified text file formatted in the same manner as that produced by the 'Export' and will add the records found to the current database. Using this you can download records from external databases, such as Libraries, Universities or Museums, into a file with any communications software. These records can then be formatted for use in the PBS database with the companion program 'Biblio-Link'.

Since I reviewed this program a new enhanced version has been released by Personal Bibliographic Software call 'Pro-Cite'. Some of the new features include: all variable length fields; twenty-two document types, including two user-defined workforms; unlimited Key word searching; sorting on all fields; automatic deletion of duplicate records; scan in-text references. This type of specialist program has limited interest, but for those that need this sort of program it must fulfill all their needs.

MacSoft congratulates Apple2000 on its new approach and wishes the group every success.

The School Manager

Two Programs in One

reviewed by the author, Bill Pearce

My aim with Mac TimeTabler has been to devise a fast and flexible system that is easy to understand and operate, capable of coping with the largest of schools, and with any complication within any school timetable. After some 30 years experience in teaching, mostly in large Secondary Modern and Comprehensive Schools, I am only too well aware of the complications and frustrations of timetabling a large education establishment.

This program incorporates ideas and suggestions from other teachers with a long involvement in school timetabling, and from the computer staff of a Teachers Centre. We reckon to have covered pretty will every eventuality. The final feature added to School Manager is Mac ClassCover. This aims to maximise flexibility and will surely dispel the 9am blues.

Mac TimeTabler is a program which enables you to create a fully integrated set of timetables in record time. All the school resources of classes, subjects, staff and rooms are coordinated. Double booking is eliminated. School geography can be accommodated to reduce change-over time waste. Data is transferred automatically between related timetables. It's even possible to arrange special facilities. What used to take days, even weeks, is done in hours.

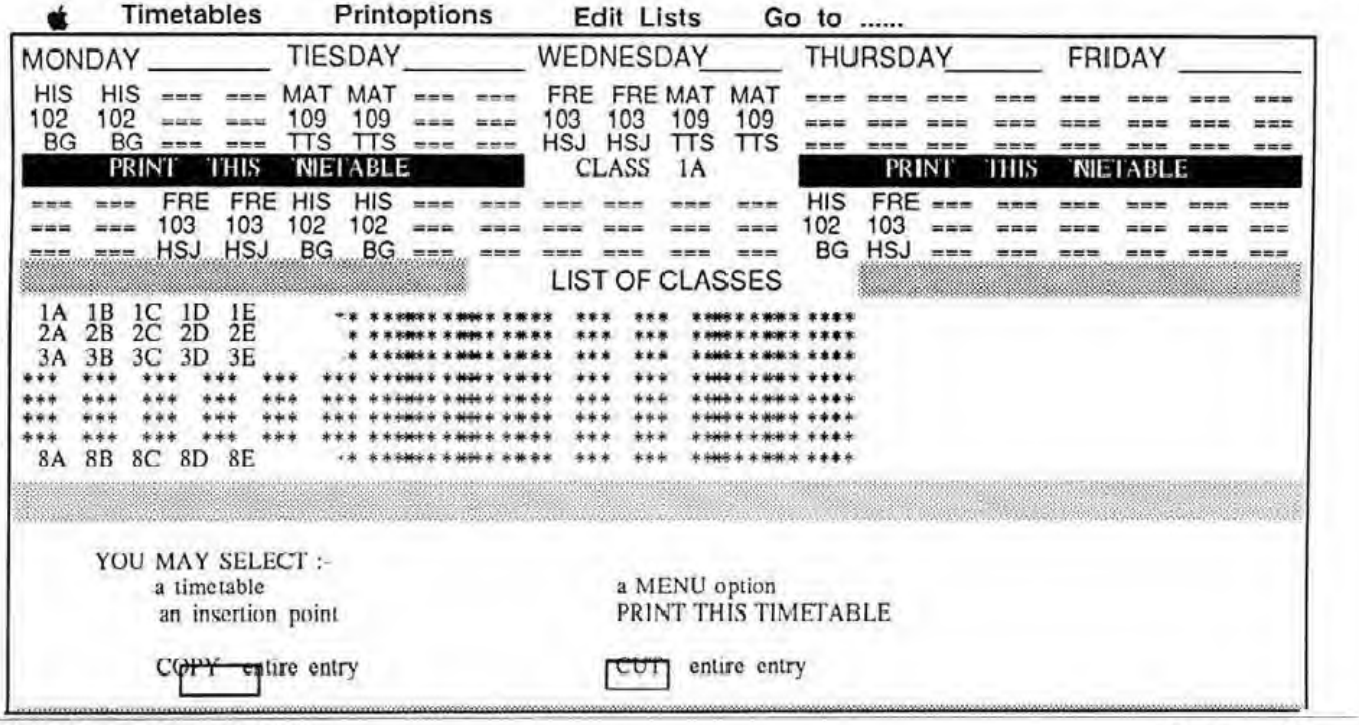
Mac TimeTabler - Main Features

Allows selection of up to 10 days in a cycle
Allows selection of up to 8 sessions in a day
Will handle up to 160 classes, 160 staff, 160 rooms, 80 subjects and 80 option groups
Instant transfer of staff and class data - fits the teacher to the class
Bookings log for each resource - eliminates double booking
Copy facility - any block of data can be duplicated within the timetable again and again
Cut facility - allows easy selection and deletion of block data
Option Groups facility - caters for the usual option group arrangements - can also be used for set subjects and sixth forms - all relevant timetables (class and staff) updated instantly
Automatic substitution - all relevant timetables are updated when a resource list is edited
Print options - printed reports of free resources (staff and rooms) option groups, etc.

Mac ClassCover - Main Features

Automatically prints a request for cover
Accesses current staff lists and timetables as set up by Mac Timetabler
Provides you with a list of staff available for cover
Makes your selection of cover staff easy and sensible
Automatically records the number of covers provided and required by each member of staff
Provides printed reports of cover arrangements.

The screen dump below is from Mac TimeTabler. More information on these programs may be obtained from Computer City, 051-420-3333.



New Library Disks!

29 New Macintosh Disks

Almost all of these new disks have 400K approx of public domain software, with no Systems or Finders.

Desk Accessories

Disk 28:- A collection of the latest DA's including DevTools 1.1, Keeper, Toggle Mouse Scaling, Skip Finder 6.1, ZoomIdle, Function Key Runner, etc.

Icon Collector

Disk 29:- Icon Collector, Scientist's Helper, BEditor, Disk Labeler, Clean Up, Make Paint, etc.

Mixture

Disk 30:- FVision files, Basic, DASampler, Autolog.

MEdit

Disk 31:- MEdit, Index, Fontsie, Font Disp, LWutils

Librarians

Disk 32:- Font Librarian, Disk Librarian, PRAM, Icon Exchanger 2.0, Hard Disk Backup, Menu Clock

Utilities

Disk 33:- Fedit 3.05, Continuity, Volumes, Iconmaker

TeX Preview

Disk 34:- TeX Preview with Rice Maths

Strange Fonts

Disk 35:- MacBraille + fonts, Kawasaki, Kutaisi, Sea Critics, Der, DiaCritics, Demotic, etc

Graphics

Disk 36:- Billboard, Dynamo, Diatom, µEarth

Shatter Comics

Disk 37:- The Fantastic Shatter Comics Demo.

Camera Simulation

Disk 38:- Camera Simulation, Smile 1.5, Mouse Trap, Company

(Continued on page 59 ->)

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ZBASIC

An Interactive BASIC Compiler

reviewed by Joe Gillespie

To those of us who have progressed to the Macintosh via Apple][s or other home micros, the absence of a built-in BASIC is probably the only thing missed. The non-appearance of Apple's MACBASIC has left Microsoft BASIC as the standard for people who want to write their own programs in a familiar and easily understood language. Excellent as it is, MBASIC suffers from two major drawbacks. Firstly, it is pretty slow compared with Pascal, C or Forth because it is an interpretive language converting each statement into machine language line by line as it runs. Secondly, it can not produce 'Stand Alone' double clickable programs that have their own desktop icons. If you write an MBASIC program and want to give (or better still, sell it) to someone else, they too have to have MBASIC which makes it a non starter as far as commercial programming is concerned.

Zedcor Inc. of Tucson, Arizona have recently introduced ZBASIC (pronounced Zee-Basic) which is a BASIC compiler. You can write your program in a BASIC very similar to MBASIC but save it as a fast, compiled, 'stand alone' application and give it its own desktop icon virtually indistinguishable from a commercial product. There is access to all the usual windows, menus, buttons and stuff that you would expect in a Macintosh program plus additional advanced levels of access to the Macintosh Toolbox and things like Appletalk and the Macintalk speech synthesis system.

The ZBASIC disc comes with two manuals at present. As it is implemented across a number of different systems like Apple][e and][c, TRS-80, CP/M-80 and MS-DOS, one manual is common to all and indeed programs written for one machine can be ported across without modification to another and will work. The other manual is Macintosh specific and gives details of the many enhancements to the standard ZBASIC that gives all the familiar Macintosh features.

Although the syntax of ZBASIC is obviously modeled on MBASIC and is generally very similar, it is unlikely that you will be able to load a previously written MBASIC program in and get it to work right away - despite what their blurb says. The manual gives a list of all the differences in syntax which are mostly to do with file handling and the way strings are treated, but even having converted these, more subtle differences are introduced because ZBASIC is a COMPILER and tends to do things in the order they appear in the program regardless of the actual program flow. This can be very confusing at first and the manual doesn't go out of its way to explain it except in the context of event trapping. I have found it much better to re-enter the program from scratch than to try modifying the old one and to take advantage of some of the more powerful commands.

In terms of speed, ZBASIC is considerably faster than MBASIC as you would expect from a compiler. A demonstration program that comes on the disc draws a three dimensional house from different viewpoints and quite quickly too, but it is when doing calculations and sorting that the increase in speed is really noticeable. File handling can be sequential or random access, or a combination of the two, and is generally better implemented than MBASIC being simpler yet more flexible. The manual gives some good, clear examples of the various techniques involved and these can easily be adapted to your own needs.

Entering or editing your program can be done in one of two ways. ZBASIC has a line editor similar to that found on most non-Mac type computers. It uses line numbers but labels can be used too if they are included in quotation marks so GOSUB "PRINT ADDRESS" would be valid. I suspect that most Macintosh users will want to give this one a miss. Although it works reliably and does things like automatically indenting loops for easier readability and highlighting valid command words, it does seem like a relic from the past that I personally would rather forget.

The other method involves a separate editor program which produces a TEXT file. In fact, any Macintosh word processor can do the same and allows cutting and pasting of blocks of program without line numbers. When loaded into ZBASIC, line numbers are added automatically (in increments of one) but a RENUM command can give any step or starting number.

If you are used to the delightful ease of editing in Microsoft Basic then ZBASIC will seem a bit of a let-down as you have to transfer to EDIT to make the smallest change. I have used MockWrite as an editor and this seems to work well as it is a desk accessory and can be called up quickly and easily from the Apple menu. In ZBASIC 3.01, the latest version, there is still an implementation of a Mac type editor within the program itself which can be called with a simple Command E or menu selection. If this worked properly it would be great, but unfortunately it doesn't and can introduce all kinds of problems - invariably ending in a hang-up or crash - use it at your peril!

There are a few other bugs and inconsistencies in the program, some more serious than others. I have found that EDIT FIELD CLOSE doesn't work properly and can cause crashes. Being a compiler, ZBASIC is more likely to crash or hang up if you make a programming mistake although syntax errors are usually trapped and reported by the program.

Unless a TRON B command is executed at the beginning of a program whilst debugging, there is no way to break out of a running program short of resetting the machine.

Having entered your BASIC program, you can RUN it immediately to see if it works much like any interpreted BASIC. When you are satisfied with it, using a RUN* option, the program is saved to disc as a 'stand alone' application with a standard default Macintosh icon. Using RMAKER, which is supplied on the disc, you can add your own icons for the application and for the files that it produces. If you don't already know how to do this, the documentation won't be of much help and some further instructions will be necessary. In fact the whole subject of Toolbox and Quickdraw calls is given little coverage and really requires 'Inside Macintosh' or 'Macintosh Revealed' to get anything from it.

Having saved the program, you will find that it has about 30K overhead of runtime support. This means that if you write only

```
10 PRINT "HELLO"
```

it will take up about 31K of disc space. This may seem like a lot compared to other compilers but on the Macintosh it is not really a problem as there is usually plenty of memory to spare and MBASIC requires considerably more than this anyway.
If you are familiar with BASIC and want a fast alternative to Microsoft, ZBASIC should be considered. It is not, as far as I know, being distributed in England yet, you will have to order it direct from the States but this is not as much a problem as it sounds - quoting your ACCESS or AMERICAN EXPRESS number in a letter will do the trick. Their 'Order' telephone number is inaccessible from the UK as it is one of those 'Toll Free' numbers but they also have a 'Support' number which can be called from here. Even after paying the VAT at point of entry, ZBASIC works out about £90 against a typical £145 for Microsoft.

Zedcor have promised a new 615 page manual for release shortly and a new high speed floating point package. Hopefully the few annoying bugs in the current version will be ironed out in the near future too - with that, we will have a very powerful, fast and easy to use programming language at a very competitive price.

ZBASIC from Zedcor Inc., 4500 E. Speedway Blvd, Suite 93, Tucson Arizona 85712 USA Telephone 0101-(602) 795 3996

PICT Resources

The easiest way to make a PICT resource from a MacDraw or Macpaint Document is to select the objects you want to include, copy to the clipboard, and paste into the Scrapbook. Then quit and run ResEdit, make a new PICT and the resource can then be copied from the Scrapbook file.

RAMStart Patches

Devotees of RamStart, the extremely useful RAM disk program which is available from the MacSig Library (Disk 17), have had some problems on transfer to a Macintosh™ Plus system using HFS. Having gathered patches and other info from several sources, here it is:-

RamStart version 1.21 needs the following patches:-
In sector $0C, offset $B4, replace 4EBA 0682 with 4E71 4E71
In sector $0D, offset $17A, replace 6700 0012 006E 8000 with 6000 0012 006E 8000
If you are using a hard disk with this version of RamStart, you may need to apply the following patch:-
In sector $06, offset $190, replace 41FA 0388 with 6000 000C
The symptom for this last problem is a message "can't find our drive #".

RamStart version 1.22 needs the following patches:-
In sector $0C, offset $36, replace 4EBA 0678 with 4E71 4E71
In sector $0D, offset $F8, replace 6700 0012 006E 8000 with 6000 0012 006E 8000
If you are using a hard disk with this version of RamStart, you may need to apply the following patch:-
In sector $06, offset $132, replace 41FA 0384 with 6000 000A
The symptom for this last is the same as in version 1.21 above.

RamStart uses a DRVR 10, which is a problem if you're using AppleTalk. To get around this, pick a driver number which isn't being used in your system file, (we understand 11 appears to work), and use ResEdit to change the DRVR number in RamStart.

We have also been told that on the Plus if you use RamStart in the usual way to create a system disk (i.e. system and finder in the same folder with it) it will not work. However, if you start it in a folder which does not contain a system and finder you can get up to 862K of RAM disk which uses HFS. You can then move a system and finder onto that disk, launch the finder and have a ram system disk.

PageMaker Problems

Beware when using PageMaker 1.2 on a 512k Mac. If you then print it on a MacPlus and Laserwriter you will probably lose all the Font information. It has something to do with the Font Manager on the new ROMs being incompatible with the old ROM and PageMaker.
Hopefully I will be able to report more on this problem in the next issue.

BOOK REVIEWS

BY Nick Hunter

MacThink!

Author: Vera F Birkenbihl
Publ. by Sigma Press, 1985. £9.95, 272 pp.

MacThink! is a thought-provoking and stimulating graphics-orientated work which is definitely worth buying. Almost every page is studded with engaging MacPaint images and there are numerous useful tips to help you think and construct images with MacPaint.

A thread running through the book emphasises the difference between rational (logical) and symbolic (spatial) thought processes which take place in the left (digital) and right (analogue) hemispheres of the brain. Most Programmers and Scientists work with logic flows which are broken up into short units organised in lines. This left brain logical activity is of less use to the Artist who works more with the right brain for perceiving relationships - especially those in space.

Birkenbihl's work is aimed at improving right brain thinking with the Mac, and in MacPaint she offers numerous useful techniques - like drawing the space between objects rather than the objects themselves. The book is well presented at a reasonable price and I have no hesitation in recommending it.

Becoming a MacArtist

Author: Vahe Guzelimian.
Publ. by Compute!, 1985. $17.95, 312 pp.

This is the best reference work combining MacPaint and MacDraw that I have come across so far. It includes many tips for organising images including perspective drawing, elongations and concealing guidelines.

Mac users will be interested to learn the difference between Transparent and Opaque forms, and how to merge a MacPaint Image with a MacDrawing using this concept. One example shows how to draw a human face on the image of a Mac screen constructed with MacDraw. This is accomplished by using the trick of making the closed Mac screen shape transparent by punching a hole in its perimeter.

Just a tiny hole allows the outside space to 'leak' into the inside of an opaque form and renders it transparent - which then provides an avenue for importing overlay image drawn in MacPaint. The result looks simple enough, but would be very hard to achieve without the sort of inside knowledge that this work provides.

The book is superbly produced, and although fairly expensive, is well worth acquiring by those intending to do serious image massaging. One of the better books for you MacArtists!

MacOffice

Author: Gregg Keizer.
Publ. by Compute! 1985. $18.95, 358 pp.

Serious texts explaining business programs for the Mac are still thin on the ground. Although there are many introductory texts pitched at the elementary level, you still have to look hard to find a work which is comprehensive, yet deep.

Fortunately MacOffice goes some way to filling this gap, and provides short but clear explanations of Microsoft's Word, File, Multiplan and Chart programmes. MacTerminal, communications and utilities are also covered.

Rather than telling you what the programs do, the book focuses on how to get them working - which is a better approach. The layout of text is beautifully clear and my only criticism is that the book lacks a ring binder - unlike its companion volume MacArtist.

MacOffice is no substitute for the system manuals which accompany the software, but is useful in explaining how each can be integrated with its companions. Separate chapters clearly explain useful activities such as producing Form Letters with 'Word', keeping Customer Lists with 'File', and merging them. I was reasonably impressed by this work, and recommend it.

The Macintosh Office

Author: Keith Thompson
Publ. by Ashton-Tate, 1985. £16.95 ($19.95), 186pp.

This work will be useful to people considering buying business software for the Macintosh. It covers a wide range of popular and powerful programmes which make the Mac useful for Office Management and Desktop Publishing.

The author's style combines perceptive accuracy with tight copy. He seems to have researched the programmes in depth, so his hard-hitting accounts make good crisp reading. The book both hits on, and compares the key features of many important Mac programmes.

If you need to know what to expect from: Jazz, Word,

ThinkTank, Excel, Multiplan, Crunch, TK! Solver, Helix, File, Overvue, Filevision, DB Master, PageMaker, MacPublisher, MacProject or Front Desk.....then this absorbing work will be well-worth buying.

In my opinion, the comparative assessments are better researched and command much more respect than the rather shallow reviews which appear so frequently in the UK monthly magazines. This hard-hitting work thus offers a quick clear route for deciding which Office software to choose.

Another System

System 3.2 and Finder 5.3 were released in the USA on 13th June, 1986 according to information received from Mac users in the States.
The new System and Finder are appropriate for use on Macintoshes which have 512K RAM and either 64K or 128K ROMs. They are also suitable for a Macintosh which has been upgraded to Mac Plus status or is a genuine Macintosh Plus.
These new files are not for use on a Macintosh with less than 512K RAM. So 128K Mac owners must stick with System 2.0, Finder 4.1, and ImageWriter 1.0.

TeX on Mac

The Macintosh version of the TeX formatting package is available now in prerelease form. In the USA it is selling for $495 from Addison-Wesley.
The package corresponds to TeX version 2.0 and requires a 512K Mac or larger with at least 800 Kbytes of disk. It supports the PostScript printers and the ImageWriters I and II. The package uses the new TeX Computer Modern fonts and also supports the built-in Helvetica and Times fonts of the PostScript printers.
It also includes a built-in editor that tolerates multiple document windows and handles very large documents quickly. They also provide a built-in previewer.
LaTeX is not yet included. An enhancement promised for the first released version is the ability to paste in pictures from MacPaint and MacDraw which the pre-release cannot yet do. The stated timings seem to be very good, with 10 to 20 seconds per page for TeX processing and 2 to 4 seconds to display a new typeset page.
Although being distributed by Addison- Wesley, the Macintosh version of TeX was developed by Barry Smith of Kellerman and Smith in Portland, OR.
Contact Brenda Cavallaro at (617) 944-6795 for more information.

Head Control of Cursor

The View Control System a "head tracker" which controls the cursor by head movements, has been developed by Personics Corporation. With practice, users find it faster for accurate positioning of the cursor than the mouse, but only for situations where one want a cursor placement leading to a "click" event. This makes the VCS excellent for text editing because one does not have to keep taking the hands off the keyboard. The VCS is less successful for intricate drawing in MacPaint or MacDraw, and is much less easy than the mouse for drawing smooth curves. The VCS allows you rapidly to switch from using the head-tracker to using the mouse. Personics claims that they have built the VCS with a microphone input, and will be providing a voice-recognition device.
VCS is made by: Personics Corporation, 2352 Main St, Building 2, Concord, MA 01742. (617) 897-1575.

Acta DA

Acta is a new desk accessory outlining program from David Dunham. Acta is owned by Maitreya Design, David Dunham's company, and is being distributed by Symmetry Software. Acta does essentially everything ThinkTank 512 does and more for under $80. Acta can transfer data to MacWrite and text files in a reasonable format, with indentation and paragraph numbering. It supports pasting of graphics, it supports different type styles within one document, and it's a Desk Accessory, always available. Acta does not have a print function, but this isn't much of a problem, because you can print easily from MockWrite or MacWrite or Word. There is even a program ("Acta runner") for using Acta on a 128K Mac.

PageMaker News

Aldus is recommending that all Macintosh users using System 3.0 or 3.1.1 take special precautions as documents from PageMaker can be corrupted by the 3.? versions of the Macintosh system software. Aldus have stated that this is a problem Apple has acknowledged and is working rapidly to solve, with assistance from Aldus. Aldus recommends that frequent back-ups of documents are made using the Save as.. option and that you change the filename often. Registered users of Pagemaker should have received some correspondence from them on this item.
Users have reported that Aldus Prep 1.2 appears to have a bug that messes up the alignment of letters in text pasted into PageMaker from MacDraw and then printed on the LaserWriter.

A selection from our catalogue of over 600 applications for the Mac

Fontographer £355.00
Create your own fonts - all fonts created by this program are totally compatible with the LaserWriter and can contain symbols, logos etc - **very powerful and useful program**

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A very powerful and accurate 3 dimensional drawing utility with outstanding features - creates wire frame and solid objects.

MacZap £49.95
Backs up protected software and also allows you to deprotect programmes for easier use and movement to hard disks etc - you NEED this program if you wish to protect your investment in software.

MacPuter 512 £425.00
Macintosh Plus version £475.00
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MagicCamera System £695.00
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As Business Forms but contains more forms all stored in MacDraw files for perfect output to the LaserWriter

Sample disk for £6.00 incl P&P etc

Mandelbrot

Disk 39:- Mandelbrot, Sea Horse Valley, Mandelzoom, Spiral

Red Ryder 9.2

Disk 40:- Red Ryder 9.2, RR9.2 manual change

The 'Would-be' Gentleman

Disk 41:- Historical Simulation - try to improve the fortunes of the 'Would-be' Gentleman.

Comms/Appletalk

Disk 42:- Appletalk demos, TCP/IP, Kermit, Monster Mac Upgrade.

Comms/BumperShips

Disk 43:- QuickDial, Kermit extras, Pretzel, Bumper Ships 1.1, FreeTerm 1.7.

MSBASIC Games

Disk 44:- Robot Battle, Vampire's Castle, Mastermind, Monopoly, Great Snake

Adventure System

Disk 45:- Adventure System, Zap the Smileys, Rascal Billiards, Black Box, Go.

Captain Magneto

Disk 46:- Captain Magneto, SpaceWar, The Adventures of Snake, Social Climber.

Dungeons of Doom

Disk 47:- Dungeons of Doom, MacLuff, Think Ahead+1.2, Enigma, Pong, Bomber.

Developer 1

Disk 48:- MacDeveloper Vols 1, 2 and 3, IEdit 1.1etc

Developer 2

Disk 49:- MacAsm, Fast Eddie, Simple Tools, Scrolling Menu Installer

Developer 3

Disk 50:- User Int Demo, Skeleton prog, Print demo, Xlisp progs, Menu INIT resource, C Forth.

Developer 4

Disk 51:- MacDeveloper Vol 4, Vol 5, Demo Sources, MacID, Laser

Developer 5

Disk 52:- MacDeveloper Vol 6, DisAsm, FPack, µEmacs, LW Utilities.

Music 1

Disk 53:- Mozart and Apple Tones, Disk Utilities.

Music 2

Disk 54:- MacNifty Demos with Money for Nuthin', MUSIC, MacMelody and Waves.

Musicworks 1

Disk 55:- Jukebox, Oldies, Christmas, Ballet de la Royne

Musicworks 2

Disk 56:- Thirty-six more pieces for Musicworks

LOCAL CLUB CONTACTS

HERTS AND BEDS GROUP :
CONTACT - Norah Arnold, [redacted]
Meets at 8.0pm on the first Tuesday of each month.
VENUE - The Old School, 1 Branch Rd., Park Street Village, St Albans, Herts.

CROYDON APPLE USERS GROUP
CONTACT - Graham Attwood, [redacted]
Meets at 7.30pm on the third Thursday of every month.
VENUE - The Waddon, Stafford Road, Waddon, Near Croydon.

LONDON MACINTOSH GROUP
CONTACT - Maureen de Saxe, [redacted]
Meets at 6.0pm on the second Tuesday of every month.
VENUE - Room 685, London University Institute of Education, Bedford Way, London, WC1

FURNESS GROUP
CONTACTS - Alan Curtiss, [redacted]
Tom Iddon, [redacted]

ESSEX GROUP
CONTACT - Pat Bermingham, [redacted]
Meets on the third Friday of every month.
VENUE - The Y.M.C.A., Victoria Road, Chelmsford

HANTS AND BERKS GROUP
CONTACT - Mike Hollyfield, [redacted]
Meets at 7.0pm on the second Monday of every month.
VENUE - Bracknell I.T.E.C., Fitzwilliam House (3rd floor), Skimped Hill Lane, Bracknell

MIDAPPLE (West Midlands area).
CONTACT - William Watson, [redacted]
Meets at 7.0pm on the second Friday of every month
VENUE - I.T.E.C., Tildasley Street, West Bromwich

HARROGATE AREA
CONTACT - Peter Sutton, [redacted]

KENT GROUP
CONTACT - Dougal Hendry, [redacted]

GLASGOW GROUP
CONTACT - Donald Davidson, [redacted]
VENUE - University of Strathclyde, Livingstone Tower (Laboratory 5.01)

LONDON APPLE II GROUP
CONTACT - Abe Savant, [redacted]
Currently seeking a venue.

BRISTOL GROUP (B.A.U.D)
CONTACT - Mike Farmer, [redacted]
Meets on the 7th day of every month`
VENUE - Bristol Maternity Hospital

LIVERPOOL GROUP
CONTACT - Irene Flaxman, [redacted]
Meeting frequency to be arranged
VENUE - 78, Victoria Road, Widness, Cheshire,WA8 7AR

NORTH WEST APPLE COMPUTER CLUB
CONTACT - Jim Rosco, [redacted]
Meets first Monday of every month
VENUE - Horse and Jockey Pub., Winwick Road, Warrington

MANCHESTER GROUP
CONTACT - Max Parrot, [redacted]
Possible change of venue and meeting time.

LEICESTER GROUP
CONTACT - Bob Bown, [redacted]
Check with Bob for venue details.

CAMBRIDGE AREA
CONTACT - Ian Archibald, [redacted]
New group forming, check with Ian

IKE from the WEST COAST of WORCESTERSHIRE

The Rumour Factory. Ever heard of it ? "No", well I am sure you have all fallen prey to its products at one time or another. They spread like a uncontrollable virus, gaining momentum and speed, as they travel the drama starved networks of communication. But unlike an illness, they bring stimulation, hope and pride to their intended victims.

" Where is this factory ? " you ask. Easier said than done.

Its foundations lie in the sunny Californian silicon valleys, where social activities break down the barriers of tight lipped technicians and where eagle eyes spot the 'out of ordinary' in a strictly secret environment. Trained ears hang on every little suggestion and murmur that slips down the corporate and workshop corridors. Patiently, the jigsaw of information is put together. The Factory is in production again, a rumour is on its way. This snippet of information could be deemed a product, worth thousands of dollars to Bell, the USA telephone company, as it spreads around the country via the telephone and BBS networks. Surprizingly no one has yet begun marketing 'Rumours', maybe they will arrive on the Shareware scene. "If you find this rumour useful, please send $10 to the Rumour Factory and we will forward all future updates."

Extra enhancements are usually provided, free of charge, by Applethusiasts resulting in a rather distorted end product. Fortunately some of us are able, at times, to distinguish fact from fiction, by following the companies market and product trends, but each day it is becoming harder to keep up with the technology traffic in the fast lane.

Well here are the latest products from the Rumour Factory. It seems that we are all in store for some great new goodies from the Apple boys. Apparently, Apple technicians at the 'Hive', are at present buzzing around busy busy with an etched smirk on their faces, the sure sign of a successful product pollination. Months before its launch, the new Apple IIx machine is old news now, but its final configuration sounds realistic. A separate keyboard and monitor and the main processor board housed in a rather contemporary box with a rear hatch to access the open architecture. Compatible with the Mac, Appletalk, Laserwriter and Hard Disc. E.T.A. ....Oct/Nov. That brings us on to the Laser. Two new models I hear. A 'personal A4' laser with low speed and low price and a larger professional A3 machine, providing this much needed format. A SCCSI Hard Disc, one inch smaller than the present HD20 and probably 20Meg as standard. A new Appletalk Modem, which will provide remote access to an Appletalk system....sounds great ! A new A4 screen, much needed in desktop publishing. Raises problems for the Mac so it could be an added feature for the IIx, and is certainly an integral part of the new Mac machine, codenamed 'Johnathan'. What we have been told is compatability, and what we see is just that.

With 5 million Apple II's installed world wide and the acceptance of the Mac interface, the intentions of Apple are clear. To protect and build on a well established base, to reap the profits of Desktop Publishing and to provide the tools for the next generation of universal language machines.

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$$y = \int_{0}^{\infty} \frac{N_1^{(\alpha-\beta)} + N_2^{(\alpha+\beta)^2}}{\sqrt{2\pi + x}} \partial x \qquad \text{if} \quad \sum_{1944}^{1952} \eta \leq 180 \quad \text{then } \Omega \neq -1$$

This was printed on an NEC Spinwriter ELF printer using Format-80 Scientific. Other supported printers include Apple's Imagewriter and Epson FX, RX and MX series and compatibles. For more details contact Elite Software Company.

Please note our new address:—

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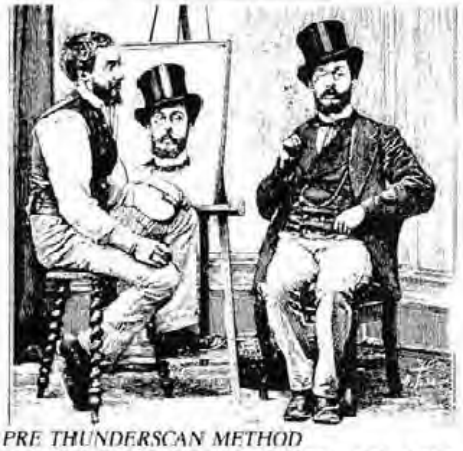

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